

# *Tribe Net*

## *V3*

# *Research List*

### **Introduction**

This is a provisional list of topics that will be considered and reviewed on a case-by-case basis. In effect this means that I will respond to player requests (though should this result in a flood of requests the response time will be slow). Some of the listed topics might be modified depending on what happens with programming, play and general administration.

Should the running of a topic become too labour intensive I might have to adopt a cap (meaning that only a certain number of Tribes will be able to hold DL0 or better in the topic).

Where possible, players should supply the GM with the effects of their research (either in Orders - or in Combat Orders if these are more relevant). Most research processing is manual and over and above the standard processing - so the possibility of a rich range of research is contingent upon player co-operation re supplying figures, effects, equivalent numbers of workers etc. If this is not for you there are many topics that require little input from players, and you should look towards these instead.

In most cases where Research [Prerequisites](#) are required they have to be met within the same Tribe, and must be attained before the relevant research is commenced.

If a Tribe happens to complete all topics within a particular skill area there is no guarantee that more research will immediately be available in that area. In many cases though a default topic will be available, for example, Hunt11, Mining 11, Com13 etc.

### **Notes**

Tribe Net is not restricted to a particular historical or cultural period (for example, from the outset you have Stone Axes alongside Iron Swords) though the aim is to reflect actual developments. The research is meant to represent vertical chronological developments in historical civilizations. However, if one were to look for an end point it would be found in the sort of technology that supports Siege Cannons, and Naval Siege Cannon. Combat related research will not progress into hand held gunpowder weapons, field Cannon, oil powered vehicles etc; ultimately the sword and shield will remain the focus of combat. While research nods in the direction of history it also adds to player interest and some items are constructed in the light of this. Thus any line drawn with respect to what is and what isn't appropriate development, what should be research and what should be standard, is going to be arbitrary to some extent and a fact of Tribe Net life.

## Acknowledgements

There are many players past and present who have contributed proposals and modifications to this document. Your contributions are appreciated.

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## **Administration**

(Books may not be written)

### **Extra Element**

**DL4 (repeating to a maximum of 3 per Tribe)**

#### **Description**

Entitles the Tribe to an immobile Element (Garrison = cost \$0.70). The Garrison may move in order to take up its initial position. Once in position it may perform Activities as per an Element but is limited to 2 Activities per turn in addition to Hunting and Herding (Metalwork Traps and Metalwork Shovels counts as two Activities). However, it may perform Scouting over and above the normal entitlement of 8 parties per Tribe. That is, a Tribe with one Garrison may use up to 16 scouting parties (as long as 8 of them come from the Garrison). HOWEVER, only once per year may the scouting patterns be changed. Useful when used in combination [with Outpost](#).

### **Extra Movement4**

**DL4**

#### **Description**

Adds 4 MV points to the Tribe's movement. Applies to Elements (but not Fleets).  
Note: when Elements are created this modifier needs to be added manually – so you will need to let me know. Should players absorb and then reform an Element with this research they need to inform me. You can not opt in Orders to not use EM once it is in place – should you not want to move the full MV you should specify only the hexes you do want to move.

### **Extra Movement6**

**DL4**

#### **Prerequisite**

Extra Movement4

#### **Description**

Adds 6 MV (+2 to the above +4) points to the Tribe's movement.

## **Alchemy**

### **Blasting Powder**

**DL5, 1 Jar, 4 Sulphur, 10 Saltpetre, 2 people. Weighs 50lb**

#### **Research Prerequisites**

Sulphur (via Volcanoes).  
Saltpetre (via Refining or Farming research).

### Description

Activity under Weapons (Wpn1). Also requires Qry10.

Used in Siege Artillery (see below)

Destructive type researched Eng works Canals, Removing Fords. X 10 output, that is, 1 person with 1 Jar does the work of 10 people. For example, to convert a Ford into a Canal normally requires 1000 Workers with tools (either Picks, Shovels, or Mattocks or combination), 20 Wagons, 10 Cattle/Horses. However, 100 workers with 100 Jars of BP (and with 100 tools) 20 Wagons, 10 Cattle/Horses will do the same job.

## **Apiarism**

### **Apiaries with Reusable Frames**

**DL3, Eng 6, Mtl 3, Wood 6**

### Description

Apiaries built with reusable wooden frames use the same materials as regular apiaries.

However the superior design involves reusable frames so the bees do not have to rebuild the structural elements (cones) of the hive after every harvest. The effect is that the Seeking of Hives is doubled in Spring 01.

### **Propolis**

**DL6**

### Description

Coded

Reddish Waxey Resin used by Bees to repair cells. Use as a healing agent - twice as powerful as Herbs.

Note: only Tribes (not Elements etc) can collect this. Weighs 1lb.

### **Breed New Queens**

**DL6**

### Description

Coded

(Once per year in Spring 01 Bee Swarms produce 24 Hives). Only one Tribe per Clan may hold this research.

Note: coding produces 6 Hives per year so you will need to show me **the extra (18) only**.

## **Apothecary**

### **Hashish**

#### **DL2**

##### Description

Requires 10 people per month to plant/maintain/cultivate the crop (for at least 6 months before first production). A crop (not in Desert, Arid, Snow) will produce 1000 Hashish in 03. Hashish may be traded at any of the major cities (for example, Shanghai will trade 100 Opium for 1000 Hashish). If a constant supply is maintained the rewards will be increased, however, do not be surprised if the city in question seeks help in eradicating this problem.

## **Archaeology**

### **Relic**

#### **DL2**

##### Perquisites

Tomb Robbers

##### Description

Works in the “Artefact” hex and is done by those already assigned to Excavation. Once per year a Relic will be found (the first the turn after research is completed). Players need to indicate when their annual find is due.

### **Tomb Robbers**

#### **DL7**

##### Description

Works in the “Artefact” hex and is done by those already assigned to Excavation. Chance of discerning location of important tombs or other buildings while searching/studying ruins – and unusual/rare or valuable items may be found inside. Gold, Diamonds, Frankincense would probably be the most obvious finds in small amounts. Once per year one of Gold, Diamonds, Frankincense will be found (that is, any one will be found each 3 years). Note: if a Tomb has been robbed within the 3 year period will not yield these spoils to a second robber within the time period). Players need to indicate when their annual find is due.

## **Architecture**

### **Architecture 1**

(to be developed)

**DL8**

**Prerequisites**

Eng10, Art 10, Scroll 1

**Archery**

**Marksmen**

**DL3**

**Description**

Marksmen can consist of up to 10% of a Tribe's warriors. A Marksman adds +6 to Archery Skill level. Similar to Yeoman Archers but drawn from Warriors. Players will need to supply a weighted Archery figure if using Marksmen.

**Yeoman Archers**

**DL6**

**Description**

5% of a Tribe's Actives can be used in combat as Archers.

**Armour**

**Bascinet**

**DL5, People 2, Iron 4, Coal 25**

**Description**

Activity under Armour

Heavy Helm. Weighs 4lb.

**Chain Barding**

**DL5, 18 Iron, 30 coal, 3 people**

**Description**

Activity under Armour

Increases the chances of a Horse surviving a battle. Approx 50% less casualties. Weighs 35lb. Either Chain OR Plate Barding may be used during Combat, not both.

## Full Plate

**DL8, People 6, Iron 30, Coal 80, Arm9, 40lb**

### Description

Activity under Armour

Heavy Plate - replaces body armour (torso, over torso, head armour and leggings) but may use any form of Shield. May only be worn by **Horse mounted** troops. May be worn by Suppressors.

## Fluted Plate

**DL9, People 6, Iron 30, Coal 80, Arm9, 40lb**

### Description

Activity under Armour

As Full Plate (above) but worn by Infantry (only). Archers and Heavy Weapons troops may not wear this.

## Greaves

**DL4, People 2, Iron 4, Coal 25, weighs 10lb**

### Description

Activity under Armour

Leg Armour

## Plate Barding

**DL7, 20 Iron, 40 coal, 4 people, Arm8,**

### Description

Activity under Armour

Increases the chances of a Horse surviving a battle. Approx 75% less casualties. Weighs 40. Either Chain OR Plate Barding may be used during Combat, not both.

## Astronomy

### Astral Navigation1

**DL2**

### Description

Once Nav Skill is at 10, Astral Navigation adds +2 to Nav Skill (making the 10 an effective 12). **Astral Navigation2 (DL3)** would add +4 (making the 10 an effective 16). **Astral Navigation3 (DL4)** would add +6 (making the 10 an effective 22) etc. AN3 is limit.

## Art

### Great Work

#### DL5

#### Description

Great Work research can be conducted when a tribe possesses ANY cultural skill = 10. In other words, any one of Cook=10 OR Dance=10 OR Art=10 OR Music=10 OR future Cultural Skill=10.

Great Work DL5 – Allows a tribe to create a Great Work in which the tribe sacrifices points of any/all cultural skills to attract locals into joining the tribe. Each point of a cultural skill that is sacrificed attracts 30 locals who will become Hirelings OR 15 locals who become Mercenaries (NOT both). In addition a performing a Great Work raises the morale of the tribe by .01 per point sacrificed up to a maximum of .04. A tribe is limited to no more than ONE Great Work in a year. Only ONE tribe within a Clan may possess the Great Work research. The number of cultural skill points that this one Tribe can sacrifice in a single is limited to 1 for every 100 population in the tribe. Finally, the cultural skill which was used to develop the Great Work research (must be 10+ to do research) cannot be reduced below ten.

For example, tribe 0775 knows the Great Work research and has Cook=10, Dance=6 and Art=4. Tribe 0775 performs a Great Work on turn 6-810 and sacrifices 2 skill points from its Dance and Art skills, reducing its cultural skills to Cook=10, Dance=4 and Art=2. Tribe 0775 could thus gain 60 Hirelings, 30 Mercenaries and .04 in morale and is prohibited from performing another Great Work until sometime in Year 811. The tribe performing the Great Work is free to reduce its cultural skills in whatever manner it deems best, other than retaining 10 in the cultural skill used to develop Great Work. For example, a tribe with Dance=8 could present a Great Work that reduces Dance to ZERO and leave all other cultural skills unchanged.

Proposed by S Simmons

## Heraldry

#### DL6, Art8, Scroll

#### Description

Ransom must be offered to any Clan (with Heraldry) losing Slaves to another Clan in Combat. Ransom must be offered for up to 30% Slaves taken @ 1 Gold per 5 Slaves or 1 Jade or 200 Silver each (that is, you can regain 30% of your people lost, but only if you can pay for them). Slaves are returned to the Clan that lost them as 1/3 of each class. A Coat of Arms and a Standard (on the battlefield) is required for the Tribe with Heraldry. Only one Tribe per Clan may have Heraldry and this is sufficient for the whole Clan to benefit. However, for the actual Tribe (only) with Heraldry Leadership is improved by 2 if in combat.

Coat of Arms (Met5, Brass 20, Gold 2, Silver 200, Log 2, 20 people), Weight 5lb,  
Standard (Met2, 1 Shaft, 100 cotton, 100 silver + 20 people), Weight 5lb,

## Spring Arts Festival

#### DL6 per

No Books.

### Description

The SAF may be initially researched under one of Music, Art or Dance. SAFA would be Art research etc. Once per Year at least 500 W/A participants will improve Morale by 0.02 for the Tribe. Having researched all 3 areas (allowing 0.06 with at least 1500 participants) will allow further research. At Adm10 you can research **Inter Spring Arts Festival, DL8** so that Tribes from other Clans (only) may participate. This will require an Amphitheatre. 10,000 Stones , 1000 Cloth, 5000 Silver, Eng8. Tribes from other Clans will require an audience of at least 1000 W/A and will not be permitted to Hunt in the hex. Any Tribe (even those from another Clan) may build the Amphitheatre.

### Statue

**DL6 Bronze (1000 Bronze, 200 Coal, 200 Silver, 20 people, Met8), weighs 1000 lb**

### Description

Bronze Statue sells at Fair. Met8 must be held by the Tribe with the research.

### Marble Statue.

**DL3 Marble (200 Marble, 12 people, Stn8)**

Marble Statues will serve as improvements to Palace etc. Stn8 must be held by the Tribe with the research.

## **Baking**

### Fine Bread

**DL6**

### Description

**Baking Activity.** Increases Bread Production by 50 percent. Flour/Grain consumption increases accordingly.

- is not coded (either on its own or in conjunction with Yeast). If you have FB using Yeast please assign an extra 50% equivalent workers. For example, 100 workers would show as 150 EqW or AM's (for main Tribe only). If using Fine Bread and Yeast in sub-Tribes you will need to show an extra 100% workers (that is, 200). You should monitor your figures when you first start using Fine Bread. See also Yeast below.

### Yeast

**DL6**

### Description

Coded

Baking Activity

Increases Bread Production by 50 percent. This is calculated after any Specialists have been added. Pls show the Activity as **Baking Bread Yeast** in your Orders (for the main Tribe only). When using Yeast in sub-Tribes you will need to show an extra 50% workers manually.

Note, if you are using an Element to do Baking you will have to show a manual equivalent number of Bakers. Example, if you have 100 Specialists with Fine Bread and Yeast they are equivalent to 400 Bakers using Flour.

## **Banking**

### **Minting/Coin**

#### **DL6**

#### **Description**

Each person assigned to Refining and Minting may process:

20 Nickel ore	6 Coal	15 Nickel
25 Copper, 5 Nickel	5 Coal	15 Coins

## **Brickmaking**

### **Brickmaking 11**

#### **DL5**

#### **Improved Brickmaking Technique**

#### **DL4**

#### **Description**

A tribe with this research knowledge has a better understanding of firing bricks; as a result they gain a 25% bonus towards production of Brick. Within a Brickworks, each person assigned produces 180 Bricks using 20 Clay\* 10 fodder and 4 coal. Orders are shown as Brickworks Stone Improved.

### **Advanced Brickmaking Technique**

#### **DL4**

#### **Research Prerequisites**

Improved Brickmaking Technique

#### **Description**

A tribe with this research knowledge has a better understanding of firing bricks; as a result they gain a 50% bonus towards production of Brick. Within a Brickworks, each person assigned produces 240 Bricks using 20 Clay\* 10 fodder and 4 coal and 1 Silver per 4 Bricks. Orders are shown as Brickworks Stone

**Advanced.**



# Captaincy

## Naval College

**DL 8**

**Gold (10 per annum)**

**Research Pre-requisite:** None – but research must be done while co-located at a University (and is part of it – hence no new building requirements).

### Description

This research topic is valueless unless the Tribe (NB developed in one Tribe cannot service the whole Clan) has already developed Admiralty.

A Naval Academy represents a deliberate and systematic study of naval warfare and the training of a tribe's naval leadership in how best to conduct naval warfare. The prerequisite of Admiralty insures that the tribe has possesses permanent naval leaders that can then benefit from the training provided by a "Naval Academy".

**Benefits:** Admiralty – For sea battle calculation purposes only:

Captaincy = Captaincy + Admiralty

Mariner = Mariner + (Admiralty /2)

All other Admiralty benefits and restrictions are unchanged

Players should tell the GM what their Mariner, Admiralty etc. skills are for the purposes of each naval battle, thus it's up to each player to provide the correct data to the GM. If the player doesn't he/she loses all benefit of this research topic.

## Admiralty

**DL 7**

### Description

This adds a **new skill** (Category B) called Admiralty. A Tribe that has completed the Admiralty research topic may develop this skill.

**Benefit:** The sum of (Admiralty and Captaincy + 2) skills together will replace the Leadership skill in all naval combat formulas.

Players are responsible for supplying the adjustment.

With Alliance (see Diplomacy) Warriors, of a different tribes/clans, carried aboard a Fleet commanded by an Admiral are under the Admiral's command. They thus use the Admiral's captaincy/admiralty ratings rather than their own if they are involved in naval combat.

## **Combat**

### **Assault Troops**

**DL5**

#### **Description**

Specialised in Attacking fortifications - effectively add +2 to Com, and +2 AA (Assault Attack Terrain Prof).

### **Army**

**DL5**

#### **Research Prerequisites**

Home Guard

#### **Description**

A Tribe with Army research increases its combat effectiveness by a factor of 1.4. Any unit using Army in combat must be in MoTC with the Tribe with the research for it to apply to that unit. A Barracks (200 logs, Eng4 - Logs are installed at 2/person. Can only be built once Army research is completed) is required to house each 50 warriors in the Tribe with the research (and its Elements). If the Army in full is not supported by Barracks then the Army bonus does not apply in combat. See Army Factor (1.4) in Spreadsheet.

Once Army is completed Home Guard becomes redundant.

### **Close Order Infantry**

**DL4**

#### **Description**

Bonus in attack/defense and against missiles.

Adds + 4 to Combat skill

### **Combat 11**

**DL5**

#### **Description**

Prerequisite for Com12 etc

## **Conscription**

**DL5**

### **Research Prerequisites**

Army and Diplomacy 4 in Tribe doing the research.

### **Description**

10% of Actives from the Tribe(s) with the research may participate in combat as Warriors.

## **Home Guard**

**DL3**

A unit using Army in combat must be in MoTC with the Tribe with the research. It is the starting research for those developing Army. See Army Factor (1.2) in Spreadsheet.

## **Training**

**DL5**

### **Research Prerequisites**

Home Guard for TP,  
Sergeant/Captain for Militia

### **Description**

1. 50% of the Home Guard (that is, 5% of the Tribe's warriors) may be sent in an Element for training in the Field for terrain proficiency (which flows on to the whole Tribe). They must be assigned to Defence only in the hex in which they gain the TP - though they may do other Activities on the way. They are able to fight if attacked but may not attack in the turn of training. This may be done twice (in total for the Clan) per Calender Year. Training lasts for 3 months. Players should include, for example, "Training GH 1/3" in Orders.

2. Six months of Training will **increase the base level of Militia from 0** (in Combat and Leadership) to 1 (in Combat and Leadership). The presence of a Sergeant allows increases up to Lv15, a Captain is required to Lv110, and a Colonel to Lv115.  
(see also Militia Training)

## **Veterans Class I**

**DL5**

### **Research Prerequisites**

Army

### **Description**

The Veterans Class I topic allows 15% of a Tribe's Inactives to fight using ONLY missile weapons and/or heavy weapons. To qualify as Veterans Class I, 15% of the Tribe's Inactives AND AN EQUAL NUMBER OF normal WARRIORS must train (as an activity and do nothing else) three months every year and each training month must fall in a different season (for example, cannot do all the training in the winter). Players are responsible for keeping records of this

Inactives include older warriors who are experienced, but too old to stand in the line of battle. However, they are still capable of wielding missile weapons or serving heavy weapons, especially if they keep "in training".

Proposed by Steve Simmons

## **Cooking**

### **Banquet**

**DL5**

#### Description

Once per year the participating Tribe gets a morale increase of 0.02. Using 20 Cattle and 20 Barrels of grog per 1000 participants (the whole Tribe is deemed to participate – but this is outside of normal Activities and Defence etc). The host Tribe may invite one guest Tribe from either inside or outside the Clan. The guest is subject to Morale increase. Cattle and drink must be shown as a Transfer to usage.

### **Great Work**

**DL5**

(see Art)

### **Stew**

**DL3**

#### Description

1 person (Cooking) produces 40 Stew (provs) using 5 Goats. Requires Cookhouse (requirements as per Meeting House). 1 Cookhouse services 10 Cooks. Cannot have more than one Cook per 200 population in the Clan when cooking Stew\_(the player is obliged to note figures here).

#### Notes

Stew + Chef

1 AM = 60 stew 7.5 goats (+0.1 Chef)

Stew + Chef + Master Chef

1 AM = approx 90 stew using 10 goats (+0.1 Chef + 0.01 Master Chef)

## **Dance**

Great Work

**DL5**

(see Art)

Spring Arts Festival (see Art)

## **Diplomacy**

(Books may not be written)

**Corps Diplomatique**

**DL 7**

### Description

Once a Tribe has completely researched Corps Diplomatique, it gains the ability to send Diplomats to other Clans, thus establishing diplomatic relations between the clans. The research is Tribe specific and Diplomats must originate from the Tribe (not Element) with the research. Diplomats are shown in your status – but they are also Inactive so transfer of Diplomat(s) means you must also transfer Inactive(s). Diplomatic Relations entail a variety of benefits, obligations and penalties as described below.

**Benefit:** Diplomatic Relations are established by a Tribe, that possesses Corps Diplomatique, sending a diplomat to the main Tribe of another clan (not Element), and that tribe/village simultaneously accepting the diplomat. The Diplomat must be sent via an Element of the Tribe. Accepting the diplomat and thus Diplomatic relations, is ordered by the other Clan in the turn following the arrival of the Diplomat at that Clan.

If both the send and accept orders are given in the same month, Diplomatic Relations are established between the two clans. Diplomatic Relations allows Trade Routes (see also Board of Trade as a requirement) to be established between a village of one clan and a village of the other clan, as if both villages were part of one clan.

Declaring war on a clan with whom you have Diplomatic Relations is a two step process. On Turn X, the clan must withdraw/expel the ambassador. This causes all diplomatic benefits in trade to be lost. On Turn (X+1), war can be declared normally. In such cases, the tribe (only of the clan that declares war) that sent/accepted the diplomat suffers a morale penalty of 0.05.

**Extra Clan**

**DL4/5/6 etc**

### Description

Completion of this topic allows an extra Tribe. It must be immobile (Village = cost \$2.50)

**Fair3**

## **DL 4**

### Description

Only one Tribe per Clan may use the Fair3 (must be able to Trade, that is, with TP or Eco). A third Fair may be held in the Year. The effect is that you may trade at double quantity limits in EITHER Fair 04 or Fair 10 (please nominate which). Slaves are at double limits for this Fair.

If other modifiers to trading limits at Fair have already taken you to the x10 limit then Fair3 enables you to trade up to 20 times the limits (rather than 20 different trades) at Fair time. The reason for this is that Fair3 is actually a third Fair that has been bundled for administrative purposes.

## **Distilling**

### **Absinth**

**DL5, 100 grain, 10 herbs, 5 Silver, per Barrel, Dis6.**

### Description

Can be sold at Fair. Opening price at Fair 500 Silver, up to 20 barrels.

### **Branded Ale (Wine etc)**

### Description

Putting your own brand on an alcoholic beverage will enable you to sell at Fair for 1.5 normal prices. In combination with Eco research and later developments will see market competition, monopolies, guilds etc come into play.

## **DL4**

### **Port Wine**

**DL2, 100 Grapes, 10 Brandy, Dis7 (5 people produce 100)**

### Description

Fortified Wine.

### **Road House**

**DL3, Eng5, 1000 Logs & 2000 Silver per**

### Research Prerequisites

Tavern

### Description

A Roadhouse is a small inn or tavern for the local population. Road House allows the Clan to sell alcohol each turn to the Local population (shown as an annual delivery and sale) for Silver. Initially Road Houses are restricted to the 6 hexes that surround the Village owning the research, so 6 road houses in total can be operated – possibly further research could extend this range.

Beverages that may be sold are restricted to Ale, Mead and Wine. 2 Barrels of each type of beverage may be sold per month per RH (that is, up to 24 Barrels per year with six operational Road Houses).

The Tribe with the research must be involved in the building of the Tavern (but you can use Joint Project rules). You must nominate one of the Fair months (04 or 10) to sell your produce (at current Fair prices) and the goods must be incorporated into the Fair Trading Orders for that month.

Proposed by Lucas Riley

## **Tavern**

### **DL4**

#### Description

Requires 500 logs to build, at Eng4 installed @ 2 per. The Tavern allows the owner to sell 2 times the normal limits on alcohol at the Fair. You do not need a Trading Post to do this. The normal limit is x 6 with Pol 10 and TP). If the Tribe with Tavern research and the Tribe conducting the Fair are different they may work together as long as they share the one Village site. Tavern with Wholesale Trading will x8 limits at Fair (noting the overall limit for Fair trading is x10).

Note, in the longer term there would be the possibility a tavern could be built elsewhere to generate monthly income from the sale of beverages. A site may have a maximum of 10 Taverns.

## **Economics**

(Books may not be written)

### **Bank**

**DL 7, Eng5, 4000 Stones, 200 Iron @ normal installation rates**

#### Description

The Bank must be built at least 10 hexes from your Home City and built in a clear hex (for example, no towns or where there is an existing unit with fortifications). The effect of the Bank is to provide a return on your Silver deposit in 12 months\*. Once a Bank has been built you may attempt the Group C Skill Banking. Each level of Banking increases the return on your deposit by 1% (lvl determined at the time the deposit is made), for example, at Bank10 your return in 12 months will be 10%. Banking research to Bank11 etc will increase your returns @2% per level. If the Bank is destroyed (reverse Eng rules apply) you lose your investment (which is taken by the unit destroying the Bank). Once the initial Bank (Silver) has been built other Banks (Gold, Diamonds, Jade and Frankincense) may be built – these will need to be at least 20 hexes from your HC.

\* the player must nominate a month in which the deposit is made (once made there can be no further deposits or withdrawals for a 12 month period. For the purposes of interest your Bank skill level is deemed to be the level when the deposit is made. Players are responsible for keeping and supplying figures.

## Board of Trade

### DL 8

#### Description

Once a Tribe has completely researched Board of Trade, it gains the ability to create Trade Routes (see Trade Route) without performing further research.

Each created route requires 1 point of Admin skill over and above any Adm points spent on Elements and/or Fleets. Thus, a Board of Trade Tribe with an admin skill of 6 (and with no elements or fleets) could create and administer 6 trade routes. Only one Board of Trade is allowed per Clan. The research is Tribe specific but any units (and only) belonging to the Clan with BoT may use the so created Trade Routes. The Create and Administer Trade Route activity is ordered:

<u>Activity</u>	<u>Commodity</u>	<u>Quantity</u>	<u>People</u>	<u>Note</u>
Admin Trade Route	0999	1	5	100 silver from xxxx Turn 1/909

One end of the created trade route must always be the Village possessing Board of Trade, the other end is specified under commodity, in the example above, the village "0999". Quantity of "1" specifies that this is the first created trade route. Each created trade route requires 5 actives to administer it and 1500 silver and 10 of a desired commodity annually. These 5 people must be committed on every turn to keep the trade route active. "Turn 1/909 specifies when the trade route was created. Players must track this data as a trade route can be changed only every two years.

The orders for a tribe that's created and is administering three trade routes would be:

<u>Activity</u>	<u>Commodity</u>	<u>Quantity</u>	<u>People</u>	<u>Note</u>
Admin Trade Route from xxxx	0999	1	5	1500 silver & and 10 com Turn 6/908
Admin Trade Route	1888	2	5	1500 silver from xxxx Turn 4/909
Admin Trade Route	3777	3	5	1500 silver from xxxx Turn 5/909

The above orders would require three points of admin skill.

Terminating a Trade Route is ordered:

<u>Activity</u>	<u>Commodity</u>	<u>Quantity</u>	<u>People</u>	<u>Note</u>
End Trade Route	-	1	-	Turn 6/908

In this example, trade route 1 could be recreated on any following turn, whose date is Turn 6/910 or later (trade routes can be created only once in a two year period).

The movement of Elements (and Fleets, if sea-borne trade has also been researched) along created trade routes is doubled to 80 mv points. The maximum length of land-based trade routes is also doubled to 240 MV points while the maximum length of sea-borne trade routes is unlimited.

#### Notes

Units may not be absorbed and created via TR's.



The research may be commenced and completed prior to placing a unit at the other end of the Trade Route. However, to use the route the second unit must be in place – and it must have a Meeting House. Movement along TR is shown as, for example, 40/80 to 0250e1. Movement is unaffected by Weather. Board of Trade allows land-based TRs of up to 240 Movement Points. The combination of Board of Trade and Sea-borne Trade allows water-based TRs of infinite length. However, water-based TRs must be divided into segments (and the maximum span of a segment is 40 hexes) and each segment must start and end at a Port (a village or garrison with a MH, Jetty and Boatshed).

**Counters:** Destroy the village with Board of Trade, see Hijacking Caravans.

## Brothel

**DL5, Eng6, 2000 logs,**

### Description

Coded

Engineering Activity

A Brothel houses 30 Courtesans @300 Silver (30 Actives) need to be assigned during the Fair. Enables the sale of sex as a Trade Fair item generating up to 9000 Silver and does not count against Fair limits. One brothel per Fair. Can lead to the research of higher class establishments such as the Bordello (in Shanghai or other NPC National Capitals) whereupon the research may be linked with Spying and/or the generation of more valuable commodities such as Gold, Silk etc.

## Carnivale

**DL3**

### Description

A Carnivale relaces the Fair. Once per year the Tribe may hold a Carnivale at Fair prices. Normal Fair limits for buy and sell are multiplied by 4. If a Carnivale is used instead of Fair and other modifiers (such as Castle are in play) the Carnivale multiplies limits by 6 (not 8). Normal limitation on Activities.

## Hire Security

**DL6**

### Description\*\*

Once per year a Tribe (ONE Tribe only per Clan may have this research) may hire up to 50 per Security level for a 12 month period @ 20 Silver each for the Year. Need to be equipped but not fed. Act at Tribe levels and are shown in addition to Warrior numbers.

## Market Place

**DL5, 500 logs, Eng 5**

### Description

The number of items traded at the Fair may be increased from 10 to 15. You need the research to use, but do not need it to build.

## Sea-Borne Trade

**DL 8**

### Description

Once a Tribe has researched Sea-Borne Trade, it gains the ability to create a water borne trade route. This route must consist only of hexes and hexsides that are passable by a fleet, thus requiring both the starting and ending villages to be accessible by water.

**Benefit:** Sea-borne trade operates under all the rules and restriction of land-borne trade routes. Of course carrying capacity is determined by the vessels assigned to the trade fleet, rather than by land-based conveyances. Historically, sea-borne trade was more efficient than land-borne trade. Thus the movement of a trade fleet is 60 MV points. The maximum distance permitted for sea-borne trade is 360 MV points before a Village base with Jetty is required. Ocean (or Lake) hexes cost 3 Movement Points for all trade route purposes. It needs to carry with enough provs to travel the distance.

A maximum of 5 distinct items may be traded this way.

**Counters:** Naval patrol in the hex of arrival.

### Supply

**DL 8**

### Prerequisites

Generalship

### Description

Mercenaries may be used offensively.

### Trade Element (increased Movement)

**DL 2**

### Description

Adds 4 MV points to the range of the Trade Element.

### Trade Routes

**DL 6**

### Description

Pending

Each Trade Route needs to be researched separately (*but see Board of Trade*).

A Trade Route must be specified as between two Villages – that is, units with at least a Meeting House (this will also determine the Movement point requirements between the two Villages).

A Trade Route can be a maximum of 80 MV points one way. Once the Trade Route has been identified it can be used by any Tribe in the Clan (as long as the conditions below are satisfied).

A designated Element (which is in addition to the Tribe's Adm allowance) becomes the Trade Element/Unit (players must notify me when this is created). The Trade Element must contain at least 20 Warriors (otherwise no restrictions on population) with metal weapons and armour with enough provs to travel the distance. I do not have an objection to allowing multiple Trade Elements to be using TR's at this stage – but this will have to be subject to practice – if this appears to be creating processing problems it will need to be reviewed.

The Trade Element (Caravan – one per Trade route) may move 40 MV points per turn (there is no distinction between mounted and foot Elements). Trade Elements move overland - but may not travel through impassable terrain.

Movement of the Trade Element is shown as directly to the unit at the other end of the leg (for routes of 40 or under) or 40/120 etc, (this means that the Trade Element has moved 40 points of the required 120 to reach the destination Village) if the route is greater than 40 mv points long. There is no terrain report etc.

The Trade Element is "invisible" and is not noted as present as it moves along the Trade Route. However, Economics research (for example, Bribery) may enable the hijacking of a Trade Element or other subversive Activities that might be dreamed up by players. A hostile Tribe may hijack the Caravan by being in the hex of arrival when the Caravan arrives with the Order “Hijack Caravan”.

Goods carried are limited by Carrying Capacity and are limited to 5 distinct item types. Animals need to be Herded. Your units using TR's should take all reasonable steps to hold the number of transfers they perform to a minimum. If not I will probably have to impose a limit, maybe 5 transfers per unit per turn.

Board of Trade allows you to change the Trade Route once every two game years. Non-Clan Villages require additional research (Corps Diplomatie). Clans that have established diplomatic relations with one another can use each other's trade routes as well as create a trade route that include each other's villages. Essentially, FOR TRADE ROUTE PORPOSES ONLY, diplomatic relations allows two different clans to be treated as a single Clan. (Trade Routes may be established with multiple Clans).

You have to explicitly state what the route is. For example N x5, NE x6 etc and you also have to state every Village along the route. For example, Trade Route 1 starts at Village xxxx and goes Nx5, NEx6 to Village 2 (yyyy) - a total of xyz MPs.

It is up to the player to be exact in their description of how you are using a TR, that is, the onus is on the player to make things perfectly clear and simple for me. Examples of how Orders will need to be shown.

Unit	Movement	MV Points	Notes
0250e1 Trade Element	Follow 0250e4	40	

Trade Route 2 will still start at Beb and go to Ceb. From Ceb, it will proceed NE, SEx4, NE to “Dee Flat”, a total of 20 movement points. It will then proceed Nx3, NW, Nx2, NWx3 (another 40 movement points) to the hex containing 0250e2 (Deb). Finally, Trade Route 2 will continue from Deb to Portsea (0250e4) by the route, SE, Sx4 (a final 20 movement points). Total 80 MP's.

### Depot

A Depot is part of the Trade Route research (that is, it is not a separate research topic).

A unit may declare another unit of the same clan as its Goods Tribe, even if the two units are not in the same or adjacent hexes, if and only if the two are connected by a land based Trade Route (ships may not be moved using this method). The unit that becomes the Goods Tribe must have constructed a Depot (Eng=7, 10,000 Stone, 500 Log, 200 Parchment) before it can be named as a Goods Tribe by any Trade Route connected unit.

Arms and Armour must be held by each unit using the depot (that is, not held by the GT) - this can only be adjusted from the Depot once every six months – and player must clearly indicate when this happens. In addition, units using TR must carry 100 Silver per person in the unit up to a maximum of 10,000 Silver (representing extra booty that any attacker might receive for defeating the unit).

For combat purposes units using the TR's are deemed to always be at one end of the TR or the other (not in between) – they may take shelter behind walls but may not be in Meeting of the Clan.

No more than 300 people can be transferred using a Depot. This includes Slaves, Hirelings, Mercenaries etc.

## **Traders Guild 20**

**DL1**

No Books

### **Description**

The effect of a Traders Guild is to allow a limited degree of short- range transfers between Guild Members' units along nominated **Guild Routes**, which represent well travelled paths amongst a stable trading community. Such transfers are facilitated by locals, i.e. no player element needs to be assigned or moved.

### **Formation and Governance**

Anyone who completes the research may choose to become a Guild Master by starting a Guild (done by informing the GM by email). Guilds are always public: the formation of new ones will be published in TribeNews and currently active ones will be listed on public TN portals. Membership of any Guild is limited to 10 Clans in total, including the Guild Master. A Clan may be a member of only one Guild. Membership is by invitation from the Guild Master to anyone they choose, cc'd to the GM: a clear acceptance to the offer must be sent to the Guild Master, cc'd to the GM. Players may seek membership once the formal invitation is issued. The Guild Master is not obliged to accept any particular application for membership. It is incumbent on the Guild Master to maintain the list of the membership in their Guild. Players may leave a Guild at any time by notifying the Guild Master by email, cc'd to the GM. Benefits to the departing player lapse effective from the date of the resignation email. Players may be voted out of the Guild via 60% of membership in favour (the Guild Master counts as two members with two votes).

Any Guild may choose to write a **Constitution**, which must be agreed with the GM. Any such document is always public knowledge and must be made available on public TN portals. It is the Guild Master's responsibility to ensure that this happens.

Should a Guild Master lose the capacity to run a Guild, a deputy can be appointed by the GM from amongst remaining Guild members. This deputy may continue to run the Guild as previously run but must immediately undertake any skill development and research necessary to support it. If no-one is able to act as deputy the Guild is dissolved and all benefits are lost

### **Operation and benefits**

A **Guild Route** runs between two **Caravanserais** (Eng 2, requires 200 logs installed at rate of 2/person) belonging to member Clans of the Guild (both Caravanserais may be owned by the same Guild member). A Guild Route consists of up to 20 contiguous land hexes (including the destination but not the start, so adjacent hexes represent a 1-hex Guild Route). Rivers, Hill and Low Mountain hexes may be freely crossed by a Guild Route. Lake, Ocean or High Mountain are impassable to a Guild Route. **Each Guild Route must**

be individually approved by the GM. Any member creating a new Guild Route must provide the GM with a graphical map showing the location of the units with Caravanserai and the proposed path in hexes. *NB Guild Route details are between the individual members involved and the GM. The Guild Master and other members need not have knowledge of all Guild Routes.*

During Trade Fair months (Turns 04 and 10) each Guild Member may conduct a single Guild Trade along an approved Guild Route. Such a Guild Trade is in addition to the normal fair; it does not count toward trade fair limits in any way. A Guild member may receive goods from as many members as are in their Guild, but may send goods only from a single Caravanserai.

For each member of the Guild, the Guild Master receives 5 Gold annually (from locals), received on Turn 1 of each game year. For computational purposes the total membership in the Guild is determined at the time the preceding turn 12 TribeNews is published. The Guild Master must show this remittance as a Transfer.

#### Initial limits

1. A Guild member may possess at most 2 Caravanserai at any one time.
2. A Guild member may possess at most 2 approved Guild Routes at any one time.
3. A Guild member may nominate a new Guild Route only once per game year. If already at the limit for Guild Routes, such a new proposal must nominate which route it is replacing.
4. A single Guild Trade may have at most 8 distinct items (plus barrels/containers for liquids). Only one of these may be a research item; otherwise items must be available on the public fair list or be an Exotic good such as Jade, Tea, Frankincense, etc. Books, Artefacts, Relics, Scrolls, people in any form (population, slaves, locals, hirelings, mercenaries, etc.) and boats or ships of any kind cannot be traded in this way.
5. The total quantity of goods transferred in a single Guild Trade is limited to the capacity of 100 Wagons (it is up to the player to calculate this – if the GM discovers an error the player will be notified, a second error and the player is forever barred from any Guild membership). Wagons capable of carrying the quantity of goods transferred must be held at the sending Caravanserai, but do not need to be moved.
6. Animals may be traded this way at a rate of 2 wagons = 2 elephants, 5 horses/cattle/dogs (untrained only), 20 goats (NB the equivalent wagons still need to exist in the sending Caravanserai).

#### Possible Future developments

*Depending on the popularity of this topic and GM workload, there may be considerable scope for additional research topics to improve member benefits, e.g. by increasing the number of Caravanserai belonging to a Guild Member, or quantity of goods (not number of items) transferred in a Guild Trade, or possibly even the number of Guild Routes a single member may possess, preferential rates at Trade Fairs or indeed just about anything else you can think of! Once multiple Guilds exist there may be scope to form one or more Associations of Guild Masters with the power to set rules affecting all Guilds whose Masters join the Association, and which may be able to offer additional benefits. The details of any of these ideas (or any others you may have!) are yet to be negotiated with the GM, however all agreed research topics relating to developing Traders Guild benefits will always be on the public Research List.*

#### **Traders Guild 25**

**DL3**

No Books

#### **Prerequisites**

Traders Guild 20, Pol 10 and Eco 10 in the same unit.

#### **Description**

A clan with highly developed Pol skill influences locals out to a longer range than one without. Effect is the same as TG20 but with a **25-hex range**. Any Guild Master completing this research automatically upgrades the trading range of any Guild member who also possess Pol 10.  
*25 hexes is the maximum possible range of a Guild Trade.*

## **Toll Gate**

### **DL3**

#### **Description**

A City with a stone wall surrounding it may build toll gates (2 required) - these enable the gathering of taxes from the locals. Generates a base of 3000 Silver once per year. (or 250 Silver per turn when coding allows).

## **Wholesale Trading\***

### **DL 4**

#### **Description**

Once a tribe has completely researched Wholesale Trading, the quantity of a good that it may buy or sell at a Trade Fair is doubled. For example, normally a tribe may buy only 5 hives at a single Trade Fair. With Wholesale Trading it may buy 10 hives (this consumes one slot). If other adjustments to Fair limits are in place then WT will double these limits. For example, a Nation with TP is allowed 4x trading limits. With WT this becomes 8x. With Castle this becomes 16x. However, the cap on trading limits is 10x (see Politics rules).

## **Engineering**

### **Barbican**

#### **DL4**

#### **Prerequisites**

Drawbridge & Gatehouse

**4,000 stone, 500 logs, 500 iron, 10,000 Silver**

A Barbican commonly was made up of 4 Stone Towers with a seamless structure in-between the towers, which housed a garrison, the winch mechanisms for the drawbridge and portcullises, its own wells, etc. In effect a Keep that defended the gate. It takes 4 x damage to standard Stone Tower to destroy them.

Adds + 4 to the effective Archery Skill for defenders in combat.

Barbican solved the problem of defence by turning the Gatehouse into a Keep-like structure that had 2 sets of gates and portcullises (an steel-reinforced wooden latticed gate - the lattice "holes" were big enough to put a polearm through, but not a body part), a common tactic was to let the enemy in by the first, putting up

a weak defence and letting them "break through" the outer gates.

Then when their initial press of enemy infantry was in the entrance tunnel/passage, both portcullises would slam shut at the front and the back for the entrance tunnel trapping the enemy. Thus allowing the defenders to slaughter the enemy troops trapped in-between the front and back portcullises through the murder-holes in the roof of the passage-way and firing arrows in through the rear portcullis. The enemy army would also be powerless to stop the slaughter and (as was intended) would suffer a morale loss from having seen their best troops (who had led the charge) slaughtered in front of them.

Proposed by Paul Malone

## Canals

### DL7

#### Description

A Canal is treated (and shown) as a River in all respects but must start from a body of fresh water (River or Lake). 40,000 AM's can turn a hexside (30,000-40,000 yards) into a Canal in flat terrain or swamp (a single Prairie hex next to the hexside is all that is needed to be regarded as flat), 50,000 in all other terrain. Not permitted adj Mnts (see Superior Canals).

Where flat abuts other terrain the higher manpower cost applies. A shovel doubles output. Canals are 40' wide.

Fords cannot be left in the newly created Canal as part of their construction.

To convert a Ford into a Canal (that is, the Ford is removed) - 1000 Workers with tools (either Picks, Shovels, or Mattocks or combination), 20 Wagons, 10 Cattle/Horses can convert a Ford into a River/Canal.

## Colosseum

### DL8, 10,000 Stones, Eng8

#### Prerequisites

Dungeon

#### Description

Once per Year 500 Slaves may entertain a Tribe. 100-300 will die. Morale will increase 0.05.

## Crenellations

### DL 4

#### Description

Once a tribe has completely researched Crenellations, the Tribe may build crenellations on walls of 20 foot or higher. Crenellations are assumed to be part of any wall construction and any existing wall, but the Tribe occupying the site must have the research for it to be effective. Adds 5% to defensive factor.

## **Drawbridge**

**DL5, 100 logs, 50 iron, brass or bronze, 400 coal and 10 rope**

### Description

Engineering Activity

A wooden reinforced bridge that can be lowered to form a ramp over the Ditch or Moat, eliminating the need for a permanent crossing over the Ditch or Moat.

Adds + 2 to the effective Archery Skill for defenders in combat.

## **Dungeon**

**DL4, 2000 stones (@ 5 per person), Eng7**

### Description

200 Slaves per Dungeon may be held requiring only 1 Overseer (but requires a Whip). Prerequisite for some Torture and other research topics. Can only be built in established Villages.

## **Fords**

**DL5**

### Description

Fords to Rivers (Eng3 if using Joint Project)

500 Workers with tools (either picks, shovels, or mattocks or combination), 20 Wagons, 10 Cattle/Horses can convert a Ford into a River.

Rivers to Fords (Eng6 if using Joint Project)

2000 Workers with tools (either picks, shovels, or mattocks or combination), 20 Wagons, 10 Cattle/Horses can create a Ford in a River. Cannot be done adjacent to Mountains.

Note: while both of these take effect at the end of the turn unless you are the builder you should not assume they will be present during your MV Orders. For example, if your MV is processed before a Ford is built (by another Clan) no Ford will be shown at the time of your MV and you will not be able to cross. In short you should not make your MV depend upon the completion of a Ford in the turn.

## **Fences**

**DL4, 100 logs (@ 2 per person), Eng4**

### Description

Engineering Activity



Each Fence holds 50 Horses or 50 Cattle or 100 Goats (no Elephants), halves Herders required (which you must show manually). May be built for other Tribes/Clans. Fences are considered to be outside Village walls (and may be built independent of Village for example, in an adjacent hex).

With fences 1 person herds 20 cattle. With dogs 1 person herds 19 cattle and the dog. So a person with a fence and a dog herds 38 cattle and a dog. 1 Smart Herder with a dog and a fence will herd 50 cattle and the dog. You can have both Stables and Fences but an animal can only take advantage of one at a time. Smart Herding would be applied to herders first.

Note: Fences **are not coded** into the Module and so your Herders required shown will not include this.

## **Fen Drainage**

### **DL5**

#### Research Prerequisites

Canals

#### Description

With the knowledge gained under **Fen Drainage**; and by means of a system of canals, ditches and drains; it is possible to drain a Swamp hex, turning it into a more useful piece of land. The target hex must be adjacent to at least one body of fresh water (River or Lake). 40,000 AM's will create the network of ditches required to drain away sufficient water that will convert the Swamp hex, into a Prairie hex. The process of draining requires a year after the ditches have been dug.

A shovel doubles output.

Fen Drainage cannot be used to drain a Swamp Hex that is adjacent to salt water.

## **Gatehouse**

### **DL 6**

#### Research Prerequisites

20 Foot Walls

#### Description

The Gatehouse requires 5000 Stone, 500 Logs, 100 Iron and 400 Coal. Logs may be substituted for stone at normal rates for buildings and may only be installed in 20' Stone Walls or better.

Adds + 2 to the effective Archery Skill for defenders in combat.

## **Keep**

### **DL 7**

(Eng 9) Stones installed @ 5/person. Gives a basic 85% bonus to losses\*

A basic keep requires 4000 stones per 1000 square yards capacity for a Keep1 (1 layer). A Keep may have additional layers of stones added to provide thicker, harder to penetrate walls. Each additional layer of stones uses the same quantity of stones as the original (8000 per 1000 square for a Keep2 etc). If a keep with a thicker wall is expanded, all layers must be increased. In keeps half normal village capacity restraints apply and each 1000lbs of non animal/person requires 5 square yards. You may not house Elephants, Cattle or Goats in a Keep. Capacity calcs relate to the Keep OR to normal fortified defence, not both. Your Keep will be shown as capacity. For example, 4000Keep1 means it is a single thickness Keep capable of storing 4000 sq yards capacity.

\* you may choose to enter the Keep at the start of any combat turn – but if you do you give up all external buildings – so no Refining etc. And you may not return to use external defences on subsequent continuous combat turns. The Keep is perhaps more useful for supporting smaller units in positions away from the main Tribe/population base. Remember that the Keep is still subject to siege.

## Outpost

**DL8, (Eng9 plus Sct8), 8000 Stones, 200 Logs**

### Description

Fortified towers for lookouts to help in the protection against being surprised by invaders

An Element containing at least 20 Warriors – cannot be overrun via Locate, and will report Locating scouts - but cannot Suppress enemy Scouts either – must be within 6 hexes of the main Village. Can be Assaulted as a 15 Stone Wall or Sieged as normal attack. However, the Outpost may build 20 etc Stone Walls (see also Keep) for better protection in combat. It cannot build towers of any sort.

## Sappers

**DL5/7**

### Description

Sappers reduce the effectiveness of defensive fortifications. *Uses 500 Logs each time deployed.* Sappers come from troops not engaged in combat. Requires 1 Sapper per 20 yards wall.

## Scaffolding

**DL5, 3 logs, 2 people (Wood6, weighs 50lb)**  
(Scaffolding done under Woodwork Activity)

### Description

The 2 people do the work of 3 for Shipbuilding or Engineering work (for example, 2 people with 2 Scaffolding would do the work of 3). The Scaffolding once made is transportable. At this stage of coding players will need to show this. For example, if you are using 20 workers with Scaffolding you would show them as 30.

## Stables

**DL4, 100 logs (@ 2 per person)**

**Description**  
Engineering Activity

Holds 30 Horse or 30 Cattle, or 60 Goats. Halves herders required. If using an adjacent hex Goods Tribe relationship Stables are best with the Goods Tribe (that is, the Tribe that holds the buildings).

As with some other Herding topics you will have to show equivalent numbers.

## Stone Wall 25'

**DL7**

**Description**  
Engineering Activity

Needs the prior three layers to exist. 75 stones per yard – 12 people to install 1 yard.

25' Walls	30 (18+12) people	210 stones per yard (if previous walls do not exist).
25' wall	8 Damage points	Total 20

## Stone Wall 30'

**DL9**

**Description**  
Engineering Activity

Needs the prior four layers to exist.

30' Walls	18 people	90 stones per yard (if 25' wall exists)
30' Walls	48 (30+18) people	300 stones per yard (if 25' wall does not already exist)
30' wall	10 Damage points	Total 30

## Superior Canals

**DL7**

**Research Prerequisites**  
Canals

**Description**

A Superior Canal; like a regular Canal; is treated (and shown) as a River in all respects but must start from a body of fresh water (River or Lake). 80,000 AM's can turn a hexside (30,000-40,000 yards) into a Superior Canal. Superior Canals are permitted adjacent to Mountains, but may not travel through any Mountains. A

shovel doubles output. Canals are 40' wide. Fords cannot be left in the newly created Canal as part of their construction.

To convert a Ford into a Canal (that is, the Ford is removed) - 1000 Workers with tools (either picks, shovels, or mattocks or combination), 20 Wagons, 10 Cattle/Horses can convert a Ford into a River/Canal.

### **Watchtower**

**DL4, Eng6, 600 logs installed at 2/person.**

#### Description

A Village with a Watchtower adds 2% per tower to the chances of Security and Suppressors detecting Spies, Scouts, Raiders and Locating groups. Watch Towers are 30' high. A Village may have a maximum of 6 Watchtowers. Requires 2 observers per WT.

### **Wire Fences**

**DL 4**

#### Description

Wire Fences = Fence. A Wire Fences can be constructed with 4 logs and 10 wire. Logs installed at 2 per person, wire at 5 per person.

## **Excavation**

### **Expert Dig**

**DL4**

#### Description

Two Artefacts may be dug per turn. Requires 20 people with implements. A unit with Expert Dig may carry unlimited Artefacts.

### **Holy Artefact**

#### Research Prerequisites

Rel 10, Expert Dig.

**DL6**

#### Description

Once per year Clan may conduct a search for a Holy Artefact at its excavation site. A Holy Artefact when found will add 0.05 Morale to one tribe in the clan. The Holy Artefact if lost in ANY WAY will remove this 0.05% bonus. A Holy Artefact may be used in the same way as normal artefacts but is worth 12 normal artefacts.

Proposed  
D Thacker

**Tomb Robbers (see Archaeology)**

## **Farming**

**Agriculture**

**DL1, DL2, DL3**

### Research Prerequisites

Farming 11

### Description

Agriculture may be attempted at [Farm11](#). The effect of gaining an Agriculture topic is to add levels to your Farm Skill.

Agr1 adds one level (for example, Farm11 to Farm12),

Agr2 adds 3 levels (for example, Farm12 to Farm15),

Agr3 adds 5 levels (for example, Farm15 to Farm20).

Agriculture also enables a new Skill (Agriculture, GrpC). At Agr10 you may research beyond Farm20 at the rate of 5 levels per Agr research topic attained.

Books may be written.

**Flax**

**DL6**

### Description

Farming Activity

Best location is flat/temperate, each person plants 3 acres, harvests 2 (1 flax = 1 cotton). Harvesting returns should automatically convert Flax to Cotton.

**Herb Plot**

**DL4**

Not coded

### Description

Brings with it a new Skill – Herbing. Herbing is a Group C Skill. 10 people/Herbing level may plant.

Herb Plots once planted are permanent, that is, they carry over into the following year. A person with Hoe can plant 5 herbplots using 5 herbs (which will be a transfer to usage). Herbs must initially be Plowed and Planted in Spring (can plant in any/all Spring months). A person can maintain 5 herbplots or 10 with a hoe. Maintained fields are managed (maintained) *once in Summer season (but not required in the year of Planting)*. A person can harvest 5 Herb plots or 10 with a hoe. Hoes are not mandatory, but would help increase the amount of acreage that you can maintain. The player is responsible for showing this.

Herbs produce an annual yield in month 12 of 2 Herbs per Acre. For example, the returns from 400 herb plots (@ 3 crops per year) would be 800 Herbs a year. The player shows this as a Transfer from 0263 of 800 Herbs. Weather does not affect Herbs.

### Alternate Description

“somedays, herbers rouse themselves from slumber (face down in ashtray) and prosecute craft with poetic ambivalence.” Courtesy of E. Waugh. Can substitute “GM’s” for “herbers” with little change to meaning!

## **Inactive workers**

### **DL 5**

### Description

Inactives can perform up to one-third of the farming activities labour.  
If not doing this they “work” for the public service.

During planting and harvesting, everybody, in the tribe worked. During planting, young children could plant seeds into furrows and the elderly could push the soil back over the seeds. During harvest young and elderly people could bundle scythed grain stalks into sheaves and collect the actual grain kernels as the grain was threshed. **Would require coding from Jeff.** Until this is done Chief, please add Actives/Warriors and Inactives into a single figure in Activities (showing the Inactives in notes).

## **Fishing**

### **Trawling Net**

**DL4 (Wv7, people 4, 30 Cotton, 25 Silver, weighs 5lb)**

### Description

Counts as 0.75 units when Fishing. The number of Trawling Nets may not exceed the number of people fishing.

## **Fletching**

## **Forestry**

**5 logs/person**

**DL5**

### Description

A forester can cut down 5 logs

**6 logs/person**

## **DL6**

### **Description**

A forester can cut down 6 logs

**7 logs/person**

## **DL7**

### **Description**

A forester can cut down 7 logs

**8 logs/person**

## **DL8**

### **Description**

A forester can cut down 8 logs

## **Managed Plantations**

## **DL5**

### **Description**

Normal Forestry activities can be performed in GH or PR but only after 1 full year after initial planting to allow young trees to take root. 50 people are required to set up the plantation - but once set up, it looks after itself.

10 people may practice Forestry per For level (til level 10) and with normal returns (but only Tribe with the research may use it). Only one Tribe in a Clan may use this.

Twice per year (in Fair months) the player receives a shipment of Logs/Bark based on the previous 6 months activity. Players are responsible for indicating the amount of Logs and Bark produced each turn, keeping a running tally and showing this in Orders in the Fair months when the shipment is due.

Note: this is Forestry research and will not produce weapons like Staves and Shafts.

## **Charring Specialists**

## **DL6**

### **Prerequisites**

### Description

2 people do the work of 3

### Saw

See Metalwork

### Scraper

**DL2, 1 person, 1 iron, 4 coal, Mtl1 (weighs 1lb)**

### Description

Metalwork Activity

Doubles rate for bark stripping.

## **Furrier**

### Advanced Trap

See Metalwork

### Improved Trap

See Metalwork

### Winter Furs

**DL4**

### Description

Furriers will be able to identify higher quality furs. They will sell for double the price of ordinary Furs at Fair. During Winter months (only) a Furrier with 5 Traps (or better) will furry 4 Winter Furs. This Activity is over and above ordinary Furring and must be shown as a Transfer, for example, "400 Winter Furs to 0250" using 100 Actives with 500 Traps.

## **Glasswork**

## **Generalship**

### Field Marshall

**DL 7**

### Prerequisites

Generalship 11

### Description



This adds a **new skill** (Category B) called Field Marshall. A Tribe that has completed the Field Marshall research topic may develop this skill.

A Tribe that possesses Field Marshall has its Generalship skill increased by one-half of its Field Marshall skill, rounded down, for all combat calculations. In addition, when two Clans are attacking the same target (or defending against two attackers) the Clan with Field Marshall may determine the order of attacks (that is, which Clan attacks or is attacked, first). This also applies when multiple units of a single Clan are attacking or defending. The Clan with the highest Field Marshall level will prevail should there be more than one Clan with Field Marshall (it outranks Generalship).

## Generalship 11

**DL 6**

## Generalship 12

**DL7**

# Healing

## Hospital

**DL8, 5000 stones, 500 logs (at 5 and 2 per person), Eng9**

### Description#

Improves population growth (0.5%), and adds +4 to Healing Skill in combat conducted in the Village where the Hospital is present. A single Hospital serves all Tribes of the one Clan in the site. Can be built for other Tribes but they require Healing research to use. Once built, all population benefits currently allowed will be automatically credited each turn (that is, the modifier is hard coded). Heal skill must be at least Lvl1 for this to happen.

## Salves

**DL 4**

### Description

1 Herb and 2 Silver can be made into 1 Salve (Healing activity) 1 Salve is equal to 2 Herbs during Healing in combat. 1 person can make 10 Herbs into 10 Salves. Weight as Herbs.

## Seek Herbs

### DL3

#### Description

Increase Herb returns when Seeking - triple finds during Seeking using the same number of people. Note, you show me triple figures after Horses, Backpacks etc have been applied.

.....

## Heavy Weapons

### Breaching Walls

#### DL6

To be developed. The effect of creating breaches is to reduce defensive factor.

[..\Combat\Breaches\BreachesSteveSimmonsSheetVII.xls](#)

One yard or breach repaired of wall requires the following:

ITEM	SKILL	TYPE	PEOPLE	LOGS/STONES
10'	Eng 4	Palisade	1 Person	3 Logs
10'	Eng 7	Stonewall	3 Person	30 Stones
15'	Eng 8	Stonewall	6 Person	45 Stones
20'	Eng 9	Stonewall	9 Person	60 Stones

Jj

### Slave Crews

#### DL6

(this is not possible under Slavery)

#### Description

Use of Slaves to fire siege weapons. 1 Warrior oversees 2 Slaves (so a Catapult needs 6 slaves, 3 warriors and a Trebuchet needs 10 slaves, 5 warriors). Operate at Skill and Morale level of Tribe.

Slaves are not available for any other activity during the turn (that is the slaves must be put on defense like the warriors). The player shows Slaves as ordinary Warriors in combat orders and must calculate weighted losses at the end of combat.

## Herding

Smart Herding, Herding Dogs and Fences have cumulative effects.

You work out how many animals that the Herding Dogs can herd, take that from the total animals to be Herded and then calc the rest. Fences are used next, then Stables, then Smart Herding, then Specialists. Horse herders (and other Herding researched benefits like Mounted Herders) are at this stage are a linear benefit. That is, modifiers do not multiply up. For instance, a Mounted Herder who is a Specialist does not exist. Note that Herding Specialists do not apply to herding Dogs.

## **Expert Breeding**

**DL 6**

### **Description**

Benefit: Add 3 to the Herding skill for purposes of Herd Growth. Players need to tell me when this research first comes in so I can manually adjust the Herd skill to 13. Note this does not mean you have achieved Herd11 for the purposes of Specialists etc. Herd11 needs to be attained separately but if it is your effective Herd level is 14.

## **Fences (see Engineering)**

## **Guard/War Dogs**

**DL6**

### **Description**

Particularly useful in Security.

Conversion to Guard Dogs from the Dog pack can occur at any time, but is non-reversible.

## **Herding 11**

**DL5**

### **Description**

Prerequisite for Herd12 etc.

## **Herding 12**

**DL6**

### **Description**

Prerequisite for Herd13 etc.

## **Horse Herders**

**DL2**

### **Description**

Each herder herds 20 Horses.

## **Hunting Dogs**

**DL6**

### Description

Hunter with a Dog counts as 3 Hunters (you will need to show this to me – for example if you have 50 Hunters with 10 Dogs show this as 70 Hunters). You may convert Dogs to Hunting Dogs (which may then not be transferred to other Clans).

## **Herding Dogs**

**DL6**

### Description

A person assigned a dog herds twice as many animals (including the dog). Herding Dogs can help herd Elephants. Players need to show equivalent Herders when using Dogs.

Conversion to Herd Dogs from the Dog pack can occur at any time, but is non-reversible (you Order “convert xx Dogs to Herd Dogs”). The dogs are non-transferrable (the research includes the ability to handle).

Dog 3 provs, 1 skin, 1 gut eats 0.5 provs per turn  
Weighs 50 lb

## **Mounted Herders**

**DL8**

### Prerequisites

### Description

Doubles the number of animals herded. Mounted Herders require a Saddle and Rope. Mounted Herders affect all animals, regardless.

## **Veterinarian Medicine**

**DL 7**

### Research Pre-requisites

Herd 11, Expert Breeding, Scroll

Books may be written but each Book requires a Scroll.

### Description

This adds a new skill (Category B) called Veterinarian Medicine. A Tribe that has completed the Veterinarian Medicine research topic may develop this skill.

A Tribe that possesses Veterinarian Medicine has its Herding skill increased by one-half of its Veterinarian Medicine skill, rounded down. In addition, its Horsemanship skill is increased by one-half of its Veterinarian Medicine skill, rounded down for the purposes of determining Horse casualties for a battle.

Herding skill is changed on once per year. **Note: it is up to the player to tell me when this happens.** For example, on turn 8/946 tribe 2999 completes the Veterinarian Medicine research topic and can start developing the Veterinarian Medicine (VetM) skill. ONE YEAR later on 8/947, 2999's VetM has reached 5 (and its Herd skill still = 11). Thus on turn 8/947, you would set 2999's Herd skill = 13. On the following year, if VetM has reached 8, Herd would be set = 15.

## Smart Herding

### DL2

#### Description

1 Herder herds 11 Horses, 13 Cattle, 25 Goats.

Requires a Crook. Wd2, 1 person makes 4 Crooks using 1 Log. Weighs 2lbs. Crooks may be made by anyone.

Specialist Smart Herders herd 22 Horses, 26 Cattle, 50 Goats.

## Stables

### DL4, 100 logs (@ 2 per person)

#### Description

Holds 30 Horse or 30 Cattle, or 60 Goats. Halves herders required. Prerequisite for some Cavalry related troops (for example, Knights).

### Herding Process

(written by the coding guy)

Check Herding Limit

Identify the number of animals requiring herders broken down by the requirement for 5, 10 or 20 herders

Check for research

Fences – number

Stables – number

Smart Herding – number of crooks

Horse Herders = Y or N

Mounted Herders = Y or N

Herding Dogs – number of herding dogs

Specialists -number of specialist herders – definitely no allowance for specialist smart herders

Reduce herders available based on the above

Fences – reduce herders required for each fence for 20 then 10 herds

Stables - reduce herders required for each stable for 20 then 10 herds

Smart Herders (Crooks) - reduce herders required for each crook for 20 then 10 herds (assumption that at least 1 herder is required per crook)

Herding Dogs – reduce herders required for each 20, then 10, then 5 herds (assumption that at least 1 herder is required to manage the dogs)

Specialist - reduce herders required for each 20, then 10, then 5 herds

Note: the code assumes that Fences and Stables do not require a herder to operate them, also no fodder is required, etc, etc

Now determine the number of herders still required

## **Horsemanship**

### **Close Formation (Close Order Cavalry)**

**DL 4, Horsemanship 10, Tactics 5.**

#### Description

Bonus (+4 to Horsemanship), in addition to, not exclusive of, all other bonuses applicable.

### **Horsebow**

**DL4**

#### Description

Allows half your Cavalry to use a Horsebow during the missile phase in addition to normal melee attack. It does not allow the Horsebow to be manufactured however. Horsebows are available but you have to find them so best not to attempt the research til you have a source.

## **Hunting**

### **Hunting Dogs**

**DL6**

#### Description

See Herding

### **Mongol Hunt**

**DL4**

#### Description

Requires at least 1000 Hunters - increases Hunt by 1.2 (that is, 1000 Hunters will hunt as if they are 1200). 1.2 affects people not equipment (that is, if you are using 100 traps with 1000 people the MH has the effect of 100 traps with 1200 people). For the purposes of the Spreadsheet you multiply ordinary Hunters by 1.2, insert this figure into Hunters, then add implements.

### **Mongol Hunt2**

**DL4**

### Research Prerequisites

Mongol Hunt

### Description

Requires at least 1000 Hunters - increases Hunt by 1.4 (that is, 1000 Hunters will hunt as if they are 1400). 1.4 affects people not equipment (that is, if you are using 100 traps with 1000 people the MH2 has the effect of 100 traps with 1400 people). For the purposes of the Spreadsheet you multiply ordinary Hunters by 1.4, insert this figure into Hunters, then add implements.

### **Trappers**

**DL4**

### Description

Hunters may use up to 10 traps/snares each. Can also use 10 Improved Traps and 2 Advanced Traps.

## **Intelligence**

### **Organized Intelligence Analysis (OIA)**

**DL4**

Allows any ONE Tribe of the Clan (this tribe must have INTELLIGENCE Skill = 10) to also ask ONE question per year about another player clan. The tribe with OIA need not be the same tribe as the tribe that asks the questions. Only questions with short simple answers are permitted. For example, what is the population of 0888? – Answer is “99,999”. All the stated limitations of Intelligence apply to this extra question. For example, for a site which is 20 hexes away the answer given should be within 2 hexes of the actual location. The question will be vetted by the GM.

Rationale – Gathering Intelligence (e.g. the Intelligence Skill) is valuable in and of itself. However, this value can be greatly enhanced by an organized effort (e.g. the Research Skill) to analyze the various clues and hints that are gathered with the Intelligence Skill. Developing this research topic represents training the researchers (that do the analysis) to work with the intelligence gathers and to develop their abilities to “put the puzzle pieces together” to gain useful data about others clans.

## **Leadership**

### **Generalship**

**DL 7**

### Description

This adds a **new skill** (Category B) called Generalship. A Tribe that has completed the Generalship research topic may develop this skill.

A Tribe that possesses Generalship has its Leadership skill increased by one-half of its Generalship skill, rounded down, for all combat calculations. In addition, when two Clans are attacking the same target (or defending against two attackers) the Clan with Generalship may determine the order of attacks (that is, which Clan attacks or is attacked, first). This also applies when multiple units of a single Clan are attacking or defending. The Clan with the highest Generalship will prevail should there be more than one Clan with Generalship.

**Counters:** Generalship is the only counter for Generalship. If units on more than one than one side possesses Generalship, the order of combats etc are determined exactly as if no one had Generalship. However, the Generalship increase to Leadership, as well as common Leadership (e.g. one set of battle orders issued by the general and all use the general's Leadership rating) is still retained.

## **Battle Groups**

### **DL 6**

#### Description

When in Combat, a Clan that has completed researching Battlegroups may, if in a Meeting of the Clan, deploy Battlegroups consisting of Archery and/or Heavy Weapons troops from only a single Tribe (that is, your best Archers may be deployed in the Missile phase). For example, ordinarily two Tribes A and B in Meeting of the Clan would use Archers at a weighted average of A and B. Under Battle Groups the archers may be taken from the Tribe with the highest Archery (or Heavy Weapons) Skill. Note – that if you want to use more Archers than are available in one of the Tribes then a weighted average will come into play (players must calculate this).

## **Junior Officer**

### **DL5**

#### Description

Adds +2 to Leadership for the purposes of determining Battle outcomes.

## **Recruitment**

### **DL1, 2, 3 etc**

#### Description

Allows an additional 500 Mercenaries per research attained to your Mercenary limits.



## Leatherwork

### Harvest Bag

**DL3, 3 leather, 2 people, Ltr4, weight 1lb,**

#### Description

A Harvest Bag is worn over the shoulder, used to assist in harvesting cotton, grain, flax, herbs, potatoes, sugar, and tobacco (not grapes because they would be crushed). Doubles the number of acres harvested (that is, increases the number of effective workers by 100%). May be combined with any other harvesting implement allowed for the type of crop being harvested (e.g. scythe, machete but not Basket); however the effect is linear, not cumulative. For example, a farmer with both a scythe and a harvest bag will harvest 9 acres of grain, not 12. Thus a farmer with Scythe and Harvest Bag is shown as 3 equivalent Farmers. A Tobacco Farmer with Harvest Bag and Machete would be shown as 5 equivalent workers (not 8).

It is incumbent on the player to show equivalent workers in Orders.

Proposed by Patrick Travers

### Leatherwork 11

**DL5**

#### Whip

**DL3, 1 leather, 1 person, Ltr3**

#### Description

A Warrior with a whip controls 50% more Slaves.

## Literacy

(Books may not be written)

### Ghost Writer

**DL4**

Description Allows one Tribe to aid another tribe of the SAME CLAN in writing books (BUT NOT reading books)

Allows a tribe with a HIGHER Literacy skill to aid another tribe of the SAME CLAN to write (but not read) books.

Restrictions:

- 1) Both tribes must be in the same hex
- 2) Only the Tribe itself counts; Elements may not be used for this. For example, 4777 and 3777 must be together in the SAME hex for 3777 to use Ghost Writer to help 4777.
- 3) Max improvement is doubling the skill of the tribe being aided. For example, Tribe 4777 has Lit = 4, Ghost Writer can improve this to Lit =8.

- 4) Max improvement can go no higher than 10. For Example, Tribe has Lit = 6, Ghost Writer improves this to 10.  
 5) Books requiring Scrolls, Artifacts, Relics, etc. CANNOT benefit from Ghost Writer

Proposed by S Simmons

**Haiku**

**DL6**

Description

Completion of Haiku adds 0.05 to Morale. Books may be written.

**Sensai (Master)**

**DL6, Scroll**

(Books may not be written)

There are five separate areas in which the Sensai may work. A single Sensai per Clan covers all Tribes and may work with more than one Tribe at a time. For example at Archery11 a Tribe using Sensai Master of Archery may immediately attempt to research Archery13 and is completed at DL4 (cf DL7 under normal progression). The fee is paid upon completion. The player must indicate to the GM when the required DL has been achieved.

Prerequisite

Lvl 11 in the Skill in question.

Master of Archery	13	DL4	50 Gold
Master of Security	13	DL4	30,000 Silver
Master of Combat	13	DL4	100 Frankincense
Master of HvyWeapons	13	DL4	100 Jade
Master of Horsemanship	13	DL4	100 Diamonds

Allows the skill to operate at level 13.

Prerequisite

Lvl13 in the Skill in question.

Master of Archery	15	DL5	75 Gold
Master of Security	15	DL5	45,000 Silver
Master of Combat	15	DL5	150 Frankincense
Master of HvyWeapons	15	DL5	150 Jade
Master of Horsemanship	15	DL5	150 Diamonds

Allows the skill to operate at level 15.

Sensai can work in combination with War College (WC bonuses apply after Sensai adjustments). Players should tell the GM what their Combat or Horsemanship skills are for the purposes of each battle, thus it's up to each player to provide the correct data to the GM. If the player doesn't he/she loses all benefit of this research topic.

### Elite Troops

A Sensai Master may teach elite troops two skill levels per year. Troops of different nationality must be trained separately that is, not at the same time. However, a Master of Archery could teach Arc levels to one nationality of elite troop while Master of Combat might teach another.

Master of Archery	10 Gold per level
Master of Security	6,000 Silver per level
Master of Combat	20 Frankincense per level
Master of HvyWeapons	20 Jade per level
Master of Horsemanship	20 Diamonds per level

### **Sensai Dan 1**

#### **DL7, Scroll**

(Books may not be written)

#### Prerequisite

Sensai

#### Description

Allows the next two progressions (to Lvl 17 and 19)

## **Maintain Boats**

### **Amphibious Warfare I**

#### Description

Allows an increase of 25% to the total people (people space – which can be converted in order to transport animals) that can be carried. For example, a Longship could carry 125 people maximum (this also applies to units from other Clans being transported).

#### **DL4**

### **Amphibious Warfare II**

#### **DL4**

#### Prerequisite

Amphibious Warfare I

#### Description

Allows an increase of 50% to the total people that can be carried. For example, a Longship could carry 150 people maximum (this also applies to units from other Clans being transported).

## Shipboard Animal Maintenance

### DL 3

#### Description

Tribes (and their fleets and elements) that know Animal Maintenance are allowed to pack twice as many animals into the same space when aboard vessels.

**Benefit:** Aboard vessels, animals carrying capacities are: Goat = 0.5 person; cattle = 2.5; horse = 4, elephant = 6.

A vessel may carry animals in both people space and in cargo space (Goat = 250; Cattle = 1,250; Horse = 2,000; Elephant = 3,000). Each vessel in the fleet requires twice as many people performing the Maintain Boats activity (unless you have MB10).

## Mariner

### Professional Sailor

#### DL4

#### Research Prerequisites

Expert Sailors

Must also have minimum of Nav 10, Capt 10, Sail 10.

#### Description

Effect is 1 professional sailor = 1.5 for crewing purposes. That is, crew requirements are reduced by 33%

Proposed by Darren Thacker

## Metalwork

### Advanced Trap

**DL4, Mtl 10, 2 people, 2 iron, 8 coal, weighs 1 lb**

#### Research Prerequisites

Improved Trap

#### Description

An Advanced trap is a continued evolutionary refinement of the Research topic Improved Trap and functions much as a standard trap. One Hunter/Furrier may use 1 Advanced Trap (with no standard Traps or Improved Traps) – this improves Hunting by 1.0 (i.e. one hunter counts as two).

## Chisel

**DL2, Mtl 3, 1 person, 1 iron, 4 coal, weighs 1lb**

### Description

A worker with a Chisel doubles his quarrying output (to 10 stones) and may also use a Mattock (the combination nets 15 stones per worker). A worker may also use a Chisel to double output with the skills Stonework and Art (stone items only). In the latter case players will need to show, for example, 1 worker with Chisel as 2 workers.

## Improved Trap

**DL2, Mtl 3, 1 person, 1 iron, 6 coal**

### Description

An Improved Trap functions much as a standard trap, but allows a 15% bonus instead of 10% bonus. Standard limit of 5 traps per hunter apply. 1 Hunter/Furrier may use up to 5 Improved Traps (with no standard Traps) – this improves Hunting by 0.15 per IT or 0.75 per 5 ITs.

## Knife

**DL2, Mtl 3, 1 person, 1 iron, 6 coal, Weight 1lb,**

### Description

Metalwork Activity

A person using a Knife doubles skinning, gutting and boning (that is, allows SGB twice during Activities). Farmers using knives can harvest double the number of acres (players need to show a farmer with a knife as equivalent to 2 farmers when submitting orders).

## Kegs

**DL3, 2 people, 1 log, 8 coal, 5 iron, Mtl4**

### Description

Metalwork Activity

Weighs 20lbs, holds 400 lbs.

## Machete

**DL 3, (Mtl 4, 2 people, 3 iron, 15 coal)**

### Description

Metalwork Activity

Long, heavy, slightly curved knife mounted on a sturdy wooden handle wrapped with strips of leather, used to assist in harvesting tobacco. A farmer with a machete harvests four acres (instead of one). Please give equivalent workers if using Machetes. For example, 100 workers with 100 Machete = 400 equiv workers.

### Saw

**DL5, 3 people, 5 iron, 40 coal, Mtl5**

#### Description

Metalwork Activity

Saws multiply logging rates x 4. Cannot be used with Adze.

a Forester with no tools cuts 4 Logs

a Forester with Adze cuts 8 Logs

a Forester with Saw cuts 16 Logs

### Seam Wedges

**DL4, 1 person, 5 iron, 15 coal, Mtl2 (weighs 1 lb)**

#### Description

Metalwork Activity

1 person, adds 50 percent to mining with Pick or Shovel.

### Scraper (metal)

**DL1, 1 person, 1 iron, 4 coal, Mtl1**

#### Description

Metalwork Activity

Doubles rate for bark stripping.

### Water Tank

**DL3, 4 people, 40 metal (bronze, brass, tin, copper may be used), 80 coal, Mtl6**

#### Description

Metalwork Activity

Holds 1000 lbs of water

### Wire Mill

**DL 6**

### Description

A Wire Mill requires 500 logs, and 500 steel or Iron to construct. Used by up to 100 people. 10 people using a Wire Mill can produce can turn 120 steel into 120 Wire at Met5.

## **Milking**

## **Milling**

### **Wind Mill**

**DL3 (Eng 10, Wd 4, Stn 4 ), 500 logs, 1000 stones, 500, Iron, 1000 Coal, 2 millstones (materials installed at normal rates)**

### Description

A new method of Milling. Although initial construction costs are significant with the power coming from wind not animals fewer people can mill much more grain.

Each Windmill grinds 8000 grain into 12000 flour each month and requires 40 millers keep it supplied with grain and remove the flour.

Windmills are restricted to 1000 per site.

Milling using Windmills and using Grain Hoppers require separate Orders showing these items are being used - else normal Milling will be assumed.

May be built under Joint Project rules.

## **Mining**

### **Appropriate Mining Tool**

**DL4**

### Description

Coded

A miner may use both a Pick and a Shovel in the same turn.

### **Geology**

**DL1, DL2, DL3**

### Description

Geology may be attempted at [Mining11](#). The effect of gaining a Geology topic is to add levels to your Mining Skill.

Geol1 adds one level (for example, Mining11 to Mining12),

Geol2 adds 3 levels (for example, Mining12 to Mining15),

Geol3 adds 5 levels (for example, Mining15 to Mining20).

Geology also enables a new Skill (Geology, Grp C). At Geol10 you may research beyond Mining20 at the rate of 5 levels per Geol research topic attained.  
Books may be written.

## **Mining 11**

**DL5**

### **Ore Cart**

**DL 5, Woodwork3, people 12, Log 10, Iron 15, Coal 100 (weighs 300lb)**

#### **Description**

Doubles output of miners (prior to other implements being added – so Picks, Shovels etc add after Ore Carts). For example, 10 miners with 1 Ore Cart count as 20 miners. Must be pulled by 2 cows or 1 Elephant (services 10 miners) when used in Mining.

Can be used in place of Wagon, same capacity, and may be carried by Elephants when empty.

Note: Ore Carts are not coded for Movement – if you are relying on Ore Carts to move you need to show this in a note in MV Orders.

### **Salt Panning (see Salting)**

**DL6**

#### **Description**

The effect is to create a Salt mine in any one Prairie hex that the Clan chooses.

### **Seam Wedges**

**DL4, 1 person, 5 iron, 15 coal, Mtl2**

#### **Description**

1 person, adds 50 percent to mining with pick or shovel.

## **Mobilisation**

### **Mobilisation 11**

**DL5**



## **Music**

### **Bagpipes**

**DL4, 2 Bladders, 1 Flute (Sew5), 1 person**

#### Research Prerequisites

Military Band

#### Description

Enhances the performance of the Military Band. Morale is raised an additional 0.02 (to 0.06) if the players are each equipped with Bagpipes. Make under Sewing.

### **Great Work**

**DL5**

(see Art)

### **Military Band**

**DL4**

#### Description

20-30 Actives all equipped with standard instruments and assigned to Defense will raise the Morale of any units in their Clan by 0.04 during battle.

**Spring Arts Festival (see Art)**

## **Navigation**

### **Astral Navigation1**

(see Astronomy)

## **Politics**

(Books may not be written)

### **Banqueting Hall**

**DL4, Pol10, GL1 or better, 5,000 stone, 500 logs, 20 gold, 10,000 Silver, 500 copper, 200 cloth. 1000 Pewter.**

#### Description

A Banqueting Hall is built by the occupying tribe as a means of encouraging the locals to join their Tribe and also as a means of raising Morale providing a feast for the people of the Tribe as well as Locals. The Banqueting Hall is impressively built and decorated in fine wrought materials and decor so as to impress the Locals.

A feast is normally held in the last long month of winter (12) to enliven the long nights and to bring joy when it is coldest. It allows the hosting Tribe a Morale boost (+0.01) plus to recruit a number of Actives according to the amount of food laid on (max 10,000 provs, @ 1 Active per 100 provs will join your Tribe as of 12/800).

Note – if a [Banquet](#) (see [Banquet](#)) is also held by any Tribe in the Clan using the [Banquet Hall](#) , the effect of [Banquet](#) and [Banqueting Hall](#) is cancelled and replaced by.

The host Tribe may invite one guest Tribe from either inside or outside the Clan.” The guest is subject to Morale increase.

## **Boat People**

**DL 4**

### Research Prerequisites

Governing Level 1

### Description

Boat People allows you to take in Immigrants (Recruits) as if any Ocean or Lake hex under your control is a land hex.

## **Capital (details may be modified)**

**DL 8**

### Research Prerequisites

Governing Level 2, Daimyo

### Description

Once a tribe, with a Politics 10 Village, has completely researched Capital, the tribe may declare its Politics 10 Village as its Capital, once the following prerequisites are met:

1. The Politics 10 Village must contain a Courthouse as defined in the rules.  
Courthouse (Eng7, Wood3, Stn4, 12,000 stones, 500 logs, installed at normal rates).
2. The Politics 10 Village must have at least San8.
3. The Politics 10 Village must have sufficient water sources (Wells, Jetty, Cistern, taking into account its Sanitation level) to maintain its population during a siege.

These conditions must be maintained to obtain the benefits of a Capital.

**Benefit:** The political benefits for States with a Capital are increased to the levels shown below:

1. A Morale bonus of 20% vs. invaders (+ 10% standard for States)
2. Taxation yields twice much as for a standard State (number of collectors per hex is the same) for the 12 hexes around the inner six (and any beyond).
3. The number of actives that joins the Politics 10 Village, once per year, is tripled.
4. All Trade is tripled.

5. The number of Militia available to the Home City is doubled.

The political benefits for Nations with a Capital are increased to the levels shown below:

1. A Morale bonus of 30% vs. invaders (+ 20% standard for states)
2. Taxation yields twice much as for a standard Nation (number of collectors per hex is the same)
3. The number of actives that joins the Capital Politics 10 Village, once per year, is tripled
4. All Trade is quadrupled.
5. The number of Militia available to the Home City is doubled.

The benefits of the Capital do combine with the benefits of a Castle. A doubling for the Castle becomes a tripling (not quadrupling) when a Capital contains a Castle. For example, Castle increases tithes by 100% Capital increased tithes by 100%. Assume silver tithes are 2,000 per month. Castle makes them 4,000. Capital makes them 6,000.

When multiple States join together in Nationhood, the treaty of Nationhood must specify which State's Politics 10 Village will become the Nation's Capital (a Nation may have only one Capital). Other State Capitals become cities that retain the same benefits as being a capital of a state.

**Counters:** Destruction of the Capital by an enemy clan causes all Capital benefits to be lost. The state/nation then reverts to the standard benefits for a state or for a nation.

Players are responsible for keeping precise figures. If you cannot do this do not bother with this research.

### **Castle (details may be modified)**

**DL8, (Pol10, Eng10, 120,000 stones, 2000 logs, 500 bronze or iron, 500 lead, 50 Gold). Normal installation rates of materials apply.**

### **Research Prerequisites**

25' Stone Wall (in same Tribe as Castle)

### **Description**

A Castle is essentially a fortified or strengthened building (acts as a 30' Stone Wall for the purposes of Siege and Assault) and capable of housing up to 6000 people and all Goods held by the Clan occupying the site (apart from Animals). If you have more than 6000 people in the site you can opt to house them behind lesser fortifications but doing so will mean likely lowering your Defensive Factor. Stables (via research) may be incorporated into the Castle to house Horses and Dogs. The effect of a Castle is to double/increase any advantages that Statehood/Nationhood confer.

The Castle is impervious to Catapults and Trebuchets (Siege Cannon will do damage as per vs 30' Wall). Researched Siege Equipment does normal damage.

At the end of any turn the Defender may opt to use the Castle rather than the external walls as their fortified defense (effectively sacrificing x-6000 people to the attacker). In this sense the first Castle maybe symbolic but it is a prerequisite for many usefuls research options).

Since the attacker is deemed to be inside the outer walls no Village type Activities like Milling, Refining etc may be done (Baking is an exception), nor are external Activities, such as Hunting, Miming etc possible

(Armour and Weapons may be made – common sense dictates what is possible). All herd is lost unless incorporated stables are present.

Only one Castle may be built in a hex.

A Castle increases the number of Special Hexes that a Clan may build in.

Players should give their Castle a name – this will become the name of the hex.

## **Daimyo**

**DL 8**

### Research Prerequisites

GL2 or better and Palace

### Description

A Clan may have only one Daimyo. The celebration of the Daimyo costs 20,000 silver.

**Benefit:** The Home City gains the following benefits from a Daimyo:

A Morale bonus of 15% (of existing Morale) vs invaders - that is, **combat within a Home City controlled hex**. (This combines with the Morale bonus for State or Nation status).

Once per year a number of Inactives drawn from the local population will join the Home City. 10 Inactives per controlled hex – **in addition** to previous immigrants bonuses. This occurs on the same turn that the population increases for Governing Levels via immigrants.

If the Home City is involved in Siege/Assault the Leadership value of each Tribe involved is increased by +4 for the duration of the combat.

Any Tribes or Elements of a Clan containing a Daimyo gain the Morale and Leadership bonus of the Daimyo if combat occurs within a Home City controlled hex. Militia may also be assigned to the combat @ the rate of **20% of available Militia**. That is, 20% of available Militia may fight beyond the HC hex.

## **Doomsday Book**

**DL 2 (Lit4, 1 Gold, 1 Leather, 10 Parchment, weight 10)**

### Research Prerequisites

Governing Level 2

### Description

The Doomsday Book allows the City to become more efficient at tax collection. A Doomsday Book must be created for each hex that will be taxed. These books must be kept in the Home City.

**Benefit:** With the Doomsday Book you will be entitled to 400 Silver per controlled hex (beyond GL2) per month, due to be paid in month 12. Players will need to indicate the total amount of Silver to be paid at this time – and should not claim for hexes under the control of another City. A Castle will increase the amount of Silver collected per Tax Collector by 50%.

The Domesday Book was the first official census of Norman England. Among other uses, it was used for Tax Collection.

Proposed by David Steinheilper

## **Emigration**

### Description

In the initial stages Emigration is not a research project as such.

Players need to alert the GM when their population hits 400,000 and then monitor as it approaches 500,000.

If and when the overall population in a Clan reaches 500,000 all population growth for the Clan reverts back to 1% regardless of research or religious benefits. At this point Emigration becomes possible (that is, optional) whereupon you may send up to 100,000 people as migrants (via Element or sub-Tribe) to a distant place (this is done automatically for the initial migration). The emigrants will establish (a second) Political center (or a first if they do not already have one). Should the settlement established by the emigrants reach 500,000 a third/second Political centre may be established, but research into "Emigration" is required to proceed to this part of the process. However, all population growth will be capped at 1% so in practice it is likely that you will need the physically transport people to do this. If your "mother" population suffers losses due to combat such that the population falls below 500,000 all applicable growth modifiers are restored until the 500,000 is reached again. This will only be applicable if attack is initiated against you (and not if you initiate an attack). Pol10 will be granted automatically in any sub-Tribe involved in the emigration and research for GL levels will need to be conducted through this sub-Tribe or its Element in the ordinary way.

GM see

[..\Rules\Miscellaneous\Emigration.doc](#)

## **Feudal Security**

**DL8 (also via Security), Eng 8,**

**Advanced Research (Scroll + Relic)**

### Prerequisites

GL1, Close Order Cavalry, Courthouse.

### Description

300 Local Feudal Horsemen act as remote Security forces. They are considered to occupy each politically controlled hex (extra research can increase this number). They are housed in a stone fort (500 yard 10' wall and moat with barred gate, and Barracks) which must be built by the owning player. The Feudal Security is considered to have permanent Security orders. They will attempt to stop any hostile forces "raiding" the Kingdom by encountering raiders in any hex "raided through". The effect is to diminish raiding forces by 300 enemy raiders per hex raided through. For example, if a Raiding party of 2000 passes through 2 controlled hexes on its way to Raiding the central State hex then the effective Raiding numbers are reduced to 1400. A hostile force occupying a controlled hex will have its numbers reduce by twice this (and includes the hex occupied). For example, a raiding party originating from a hex adjacent to the central hex will have its effective Raiders diminished by 600. Note, the Feudal Security is

effective against any and all Clan Raiding regardless of the numbers of Clans involved (counter research aside).

The locals will provide the provs for the Feudal Security.

Note Feudal Security are independent of Militia and do not come to the defence of the State nor do they act as Suppressors. They are useful against Raids only. Upon completion players need to remind me to name [the surrounding hexes 0250FS1](#) etc, these names will override names previously assigned to the hex.

## **Fortress**

**DL8, (see Castle for material requirements plus 60 Gold per Year)**

**Advanced Research (Scroll + Relic)**

### Prerequisites

Castle

### Description

The Fortress requires the same materials as a Castle (that is, you can build one anywhere) and capable of housing up to 6000 people and all Goods (apart from Animals, Stables (via research) – but it does not control surrounding hexes. That is, it acts purely as a fortification. It cannot recruit Militia as a Pol10 hex does but you may deploy up to 20% of your Pol10 Militia to this hex (as a defensive force only) – leaving 80% behind. Must be built 6 hexes from your Castle. A second Fortress may be built 6 hexes from the first (a third and fourth Fortress require further research). Cannot be built in any hex under Pol control of another Clan unless a Nation is in play.

## **Government Level 1 (to 5)**

**DL1 (and subsequent DL's)**

### Description

Coded

The start of the Empire (see Politics Rules).

## **Great Wall**

**DL9**

### Prerequisites

Eng10, Stonework10, Pol10, GL3+, Castle,  
1 Gatehouse, 3 Watchtowers per hex side and 1 Relic to consecrate each hexside.

100,000 stones plus 3 Watchtowers per hex side for a 10' wall.

150,000 stones for 15' wall – that is, 250,000 stones total per hex side for 15' wall.

Etc for higher walls.

No differentiation for terrain. Not possible/required in hex sides bordered by impassable mountains.

### Description

The Player must specify, before beginning the Great Wall, the wall's start- and end-points which form a "closed loop". Must be a minimum of 6 hexes distant from the main builders Pol10 centre at all points (if more than one Clan is participating in construction the main builder must be specified).

For practical purposes the Great Wall will not be considered to be operative until the loop is completed/closed (once completed it may be expanded but new portions will not count til the next loop is completed etc) – a loop may include river, oceans, lakes and impassable terrain. Indeed, a completely new loop may be started beyond the existing loop.

The GW effectively takes up a whole hex which once built becomes impassable terrain. Should the hexes externally adjacent already be named, or contain Locals etc these will need to be either renamed, destroyed or relocated. A relocation requires a 100 Gold tribute. Such hexes will be dealt with on a case by case basis.

A GW can be built on the same hex side (that is, alongside) a river but if built "across" a river then river Travel "through" the wall is possible. A unit may build on one hex side only in the turn.

### Benefits

Completion of the GW allows free range Herding – all Herders operating from a Home City within the loop are reduced to 10% of normal requirements as long as each of the herders are mounted (it is up to the player to note this – including other Clans affected which must also show this on their Orders).

The HC Clan gains 10 gold and 200 Silk per hex side of Great Wall per year as tribute. Where two or more Clans combine to enclose an area the Gold tribute is divided equally among those Clans.. \* a state of Alliance, Statehood or Nationhood must prevail.

Effective Seeking Skill is increased +5 for units seeking inside their GW.

Any combat conducted by the owner of the GW inside its loop gains 20% of assigned troops as additional locals. For example, 500 troops assigned to combat will be bolstered by an additional 100 (loses are in ratio) for the duration of the combat.

Research may be proposed that demolishes a section of the wall (effectively a hex side) which will allow passage through this hex side – but the research will need to be commensurate with the research required to build the GW.

## **Ho Chi Minh Trail**

**DL8, 2000 workers, 20,000 Silver, 200 Gold, Eng7, Relic**

### Prerequisites

Control of at least two "Locals" hexes.  
Home City cannot be in Prairie or Tundra hexes.

### Description

If your Pol10 centre (Home City) is placed under Siege or otherwise attacked you may move people or goods to any other of your units within 12 hexes of the Pol10 centre. This can be activated in the turn of the attack. The attacker may immediately take ownership of any Village works/site left behind.

The Trail includes a system of underground passages at the Pol10 centre. With the assistance of Locals you are able to move people unobserved by the enemy.

\* 1500 in 0939, 1800 in 0940, 2100 in 0941 etc.

## **Local Trade Routes**

**DL4, Pol10, GL1 or better, 10,000 silver to establish, 1 Silver per 1000 lbs transferred.**

This research allows city-states to make use of the local merchant and trade routes that are present in its vicinity to transfer goods in the local area.

Local trade routes allow up to 4 transfers to be made between a city state and any units within a radius of GL+2 hexes (i.e. a GL0 city state can transfer to or from any 4 units within a 2 hex radius). The units engaged in LT can be from a different clan but must also be serviced by Pol10 and GL1 or better. Transfer range is not affected by weather.

Transfer type is shown as "Local Trade Route" in transfer orders:

0250 to 0250e1 Logs 2000, Bark 8000 (408,000 lbs) Local Trade Route.

It is up to the player to calculate weights and transfer sufficient silver every month to 1263.

Local trade routes cannot be used if the sender or recipient is under Siege or DEVA.

## **Logistics1**

**DL3**

### Description

Logistics1 is a Group B Skill. It allows 1% per Logistics level of Militia available to the Home City to defend any hex under the control of the Home City that falls under attack within the "A" zone (generally 10 hexes away). Costs 5 Silver per Militiaman deployed. It is incumbent upon the player to show that the attack in question occurs within a controlled hex.

Logistics2 and beyond will enable joint Militia to defend with respect to attacks vs zones further from the Home City. Costs 10, 15 Silver per Militiaman deployed etc.

## **Marshals**

**DL3**

### Research Prerequisites

Governing Level 3, Sheriffs

### Description

Marshals work like Pacifiers and Sheriffs, except more efficiently. One Marshal will replace three Sheriffs. Marshals must be equipped with Shields, Full Plate, Swords, Spears and Horsebows. If better armor or weapons are obtained they may be used. (For example, Lance may replace Spear.) Marshals must be mounted on Horses with Saddles. Marshals are housed in a Hall of Justice, 100 Marshals to each Hall. Marshals are considered to always be on defense and will automatically contribute to the number of defenders assigned.



If the Politics 10 city is under siege, the Sheriffs may be dismounted and assigned to any of the defensive positions. Fluted Plate may be substituted for Full Plate during combat.

**Counters:** Loss of Governing Level 3

## **Militia Training**

**DL 5**

### Research Prerequisites

Capital,

**Cost (1 Silver per Militia per year 12 months after completion).**

### Description

(see also **Training**)

Once a tribe researches Militia Training, its Home City may initiate the training of Militia.

One year after the MT the military skills of Militia increases to (Arc3, Hor3). A year after this Archery and Horse are increased to 6. Etc to a maximum of 12. Players are responsible for prompting the GM, for showing costs etc.

## **Mission**

**DL4 (same requirements as Temple)**

**DL5 for a second Mission etc**

### Research Prerequisites

Castle

### Description

Mission raises Morale by 0.02. A mission must be at least 12 hexes from the Castle and cannot be built where a Village already exists. Once per year (at least 12 months after the Mission is built) the Castle owner may contribute up to 8,000 Silver to the local community in return for 80 Inactives joining any unit present at the Mission site. Note that a Mission may be offered to some Clans without the research but in this case there is no control over where it may be built and it is unlikely that the number of Missions offered will be more than one.

## **Palace (may be modified)**

**DL 6, Eng 10, 50,000 stone, 5000 logs, 10,000 Silver, 50 Carpet, 50 Tapestries, 5 Statues, 20 Sculptures, 150 Gold and 50 Diamonds.**

### Research Prerequisites

Castle

## Description

The home of the Daimyo. One per State. See also “Locals” in the Mandate. A Palace increases the number of Special Hexes that a Clan may build in. It also attracts a one-off contingent of Elite Troops.

## **Palace Renovation Gardens**

**DL 8, Eng 10, 80,000 Stone, 8000 Logs, 50 000 Silver, 50 Gold, 1000 Iron, 2 Tigers, 10 Sculptures, 2 Relics,**

## Research Prerequisites

Palace, Daimyo

## Description

The Palace Gardens are, among other things, a place for the Daimyo to rest, relax and entertain guests or even do a bit of recreational hunting. Built within the safety of the Palace walls and taking up an area of 1000 000 square yards the Palace Gardens provide the Daimyo with a variety of entertainment options.

The Palace Gardens contain many smaller building such as stages for artistic performances, enclosures for the Tigers and quarters suitable for guests such as visiting a Daimyo his entourage (up to 600 people). To accrue the benefits the garden must be maintained in pristine condition and staffed, there must be artisans available to perform at any time and the number of Tigers must be maintained at 10 or more.

Basic garden maintainance	200 actives per month
Herding of Tigers	1 herder per animal
Artisans	At least 20 performers (from a Tribe with a completed research topic in a cultural skill per month)
Security	as per pacifying a controlled hex (if sheriffs or marshals are used they do not require horses)

## Benefits:

1. A further Morale bonus of 10% (of existing Morale) vs invaders - that is, combat within a controlled hex (see Politics). This combines with the Morale bonus for State or Nation or Daimyo status.
2. Once per year a number of Inactives drawn from the local population will join the Home City. 10 Inactives per controlled hex – in addition to previous/other immigrants bonuses. This occurs on the same turn that the population increases for Governing Levels via immigrants.
3. Having Palace Gardens provides an alternative method of obtaining a treaty. Rather than having to research a treaty the Daimyo of another state can be invited to visit. Together, in the tranquil environment of the Palace Gardens the two Daimyo's are able to work out the details of a treaty there and then. Daimyo is a prerequisite.
4. Once the Gardens are established (with Tigers) locals will be attracted to surrounding areas. The result will be the immediate offer to **build two Local structures** (see Locals).
5. A one off of **1000 Hirelings** will be attracted to the Home City.

Proposed by Mark Ryan

Posse

**DL4**

### Description\*\*

For each 5 warriors assigned to Security a Local may be added if and when required.

## Sheriffs

### DL4

### Research Prerequisites

Governing Level 2

### Description

Sheriffs work like Pacifiers, except more efficiently. One Sheriff will replace three Pacifiers. Sheriffs must be equipped with Shields, Helms, Chain, Breastplate and Trews or better. No Bronze, Ring or Scale armor is allowed. Minimum weapons must be both Swords and Spears. Any type of bows may be used. If better armor or weapons are obtained they may be used. (For example, Lance may replace Spear and Full Plate may replace component pieces.) Sheriffs must be mounted on Horses with Saddles. Sheriffs are housed in a Hall of Justice (10,000 Stones, Eng9 and may be built with the attainment of Sheriff). 100 Sheriffs to each Hall. If the Politics 10 city is under siege, the Sheriffs may be dismounted and assigned to any of the defensive positions.

**Counters:** Loss of Governing Level 2

## Treaty

### DL3

### Research Prerequisites

GL1

### Description

Treaties formally define control of disputed Political territories (that is, the point at which two or more States become overlapping States). Each new treaty must be researched separately. Either party can develop treaties and must be announced by each party to the treaty in the same turn (like Truces). The terms must be finalised within 2 turns of development. The treaty will become operational following the turn in which both parties accept the terms of the treaty (expending 6 parchment each). If any party formally rejects the treaty at any stage after the terms are finalised, it is destroyed. A Treaty need not address all hexes in dispute, but if it does, this aim needs to be specified at the time of researching, and the hexes specified. The terms of a treaty may not be extended to encompass territories either not in dispute or omitted at the time the research was successful.

### Breaking Treaties:

Terms may be renounced in several ways. One party can research a new Treaty and, if agreed between the parties, this can replace the old one. One party could leave the area (or the game) abandoning their State. Otherwise, Research could be performed to declare an existing Treaty invalid with respect to one or more Territories, which would then return them to disputed status.

## Zealots

## **DL6, 1 Gold per 10 Zealots and/or 1 Jade per 5 Zealots**

### Description

Immediately after a battle local enthusiasts for your cause may join your Clan. The number of Zealots who will join are up to 20% of those of your Warriors (only – that is, will not replace Mercenaries etc) killed in the battle. Zealots act as ordinary Warriors (and may be assigned to work during Activities in subsequent turns) however they do not breed and do not need feeding. Furthermore Zealots may not be assigned to defense when in attack mode – that is, they may **only** be assigned if a unit has “Defend” Orders in combat (and will not be available if these Orders are changed). As with Mercenaries, Zealots killed in battle are killed pro rata. In the battle the GM will deal only with Warriors – it is up to the player to translate losses into Warriors, Mercenaries, Zealots etc lost and give me the new numbers. Numbers that can be held are limited by [Lodging](#) requirements.

Zealots are also available (independent of the 20% rule) from certain Special hexes. However, at no time may the Zealots in a unit exceed 50% of Warriors in the unit.

## **Pottery**

### [Advanced Pottery](#)

#### **DL5**

### Description

1 person produces 2 ewers using 5 Silver each  
2 people produce 2 jars using 10 Silver each  
4 people produce 2 urns using 10 Silver each

Clay and Coal consumption remain the same.

### [China](#)

**DL6, 20 Coal, 4 Kaolin, 10 Silver, 2 people  
Firing Kiln (see Refining smelter for details).**

### Description

### [Terracotta Army](#)

**DL8, Eng 8, and Rel 10  
10 000 Stones, 1000 Logs make 1000 Terracotta warriors (each weighing 100lbs)**

### Research Prerequisites

Damiyo

### Description

A leader such as a Damiyo desires security in the afterlife befitting his stature. The stones and logs are for the housing for the terracotta army and are installed at 5 stones and 2 logs per person.

Benefits:

1. The terracotta army is a clear physical symbol of the leaders belief in religion and the afterlife and naturally this effects the entire population. Completion of the terracotta army by a clan allows a combat bonus of +6 Combat when in combat if the [Terracotta warriors are present](#).

Proposed by Mark Ryan

## Quarrying

6 stones/person

**DL5**

Description

Each quarrier can quarry 6 stones. Please note, the module will automatically upgrade Tribe quarrying figures. However, this may not happen with Elements and will need to be done manually – you need to refer to this ONLY when the first attempt at Qry with new figures is done.

7 stones/person

**DL6**

Description

Each quarrier can quarry 7 stones.

8 stones/person

**DL7**

Description

Each quarrier can quarry 8 stones.

9 stones/person

**DL8**

Description

Each quarrier can quarry 9 stones.

**Extra Quarrying Tools**

## DL4

### Description

A person sent Quarrying produces 5 Stones, and if equipped with a Mattock they produce +5 Stones (10 in total; in effect working as two people). A Tribe that knows Extra Quarrying Tools understands that by providing extra tools; and training; they can get better returns on quarrying. If equipped with a Shovel in addition to a Mattock; they will produce an extra +5 Stones (15 in total; in effect working as three people). The bonus is only effective when a person is equipped with both tools. You must show Quarriers as equivalent workers, for example, 100 workers using 100 Mattocks, 100 Shovels and 100 Wheelbarrows are shown as 400 Quarriers (the Wheelbarrows adding an equivalent 100 to the 300).

## Masons

## DL4

### Description

A Tribe with this research knowledge has a better understanding of the nature and preparation of quarried stone; as a result they gain a 10% bonus towards production of Stones. Effectively 1000 people will do the work of 1100 people. Needs to be shown as an equivalent number of workers. For example, 1000 workers with 1000 Mattocks = 2200 equivalent workers.

## Master Masons

## DL4

### Research Prerequisites

Masons

### Description

A Tribe with this research knowledge has a better understanding of the nature and preparation of quarried stone; as a result they gain a 25% bonus towards production of Stones (this replaces the bonus gained under Masons). Effectively 1000 people will do the work of 1250 people.

## Refining

### Coke

**DL8, 1 person refines 20 Coal into 15 Coke, created as a normal Refining Activity.**

### Description

Coded

Makes more efficient use of coal for Refining and Armour and Weapons production (1 Coke = 2 Coal). Also required for Steel to be made.

These are the items that can be made using Coke instead of Coal ([all will require Silver](#)).

Conventional Items: Breast Plate, Helm, Shield, Chain, Sword,

Research:

Full Plate, Greaves, Bascinet

Refining: Copper, Iron, Steel (necessary)

### Increased Output

**DL4 (10%)**

**DL6 (50%)      DL4 Prerequisite**

**Cannot go beyond 50%.**

### Description

Increased Refining Output by 10%/50%.

Assign extra (paper) people to the refining process. For example, if you deploy 100 refiners they would do the work of 110. You would show this as 110 equivalent Refiners (with the 100 mentioned in notes).

### Saltpetre Refining

**DL2**

### Description

Requires Saltpetre Refinery (Engineering5, Stonework5, 100 Logs, 100 Stone - installed at 2 logs and 5 stone per person, for 70AM). A Saltpetre Refinery can service up to 100 cattle. Uses Refining Skill for limits. 1 person can gather 10 Saltpetre from 2 cattle per turn, that is, 50 people can refine Saltpetre per standard refinery.

### Steel

**DL8, 1 person uses 20 Iron, 15 Silver & 10 Coke to make 15 Steel.**

### Description

Coded

Better Armour and Weapons - Steel to Iron is like Iron is to Bronze. Working with Steel requires 1 skill level higher than working with Iron (and some Gold and Silver to pay for expertise and materials). At this stage some steel items are Chain (30 Silver), Breast (Gold 1, 40 Silver), Helm (15), Shield (15), Sword – Katana and Scimitar (Gold 2, 20 Silver), Spear (0) and some research such as Full Plate (Gold 2, 50), Fluted Plate (Gold 2, Silver 40), Bascinet (20) and [Greaves \(20\)](#). Not Arrows.

The Romans could make Steel around 900 AD.

### Research Prerequisites

Coke (must be in the same Tribe as the Steel research)

## Religion

### Archbishop

#### DL6, Relic, 20 Gold

No Books

#### Research Prerequisites

Bishop (with Cathedral)

#### Description

The AB enables the primary Tribe to recruit crusaders. Each member of the Religion may contribute up to 20% of its Warriors and up to 5% of its Actives to the Crusading Element (CE) which is under the authority and command of the Archbishop (it works at the skill levels of the Archbishop Tribe, that is, the Primary Tribe – except that its Ldr Skill is the sum of Ldr+Rel skill). The number of Warriors in the crusading Element cannot exceed the number of Inactives in the AB's Clan. Players are responsible for keeping track of how many people it sends to the CE – and, in consultation with the Head of Religion, for noting how many people should be redistributed if the CE is disbanded or takes losses in combat. To join the CE the recruited crusaders must physically march to do so. Normal 33% limits on combat apply.

#### Blessing

#### DL4, Scroll, 10 Parchment, 2000 Silver

No Books

#### Research Prerequisites

ArchBishop

#### Description

This confers a Morale bonus of +0.10 when the CE is in battle.

#### Cathedral

(and other Religious structures tba)

### Convert Seeking

#### DL 6

#### Description

This religious research allows a Tribe to Seek for Converts on Spring 1 turns. The upshot is that the number of Recruits normally found is tripled. Religion or Seeking ability is used [for Actives only](#) (whichever is the higher). Note: if you use Rel Skill you will have to enter this as your Seeking Skill in the spreadsheet – but be sure to [use your Seeking Skill for all other goods](#).

### Fanatic Warriors



## **DL 7**

### **Description**

Once a Tribe has completely researched Fanatic Warriors, its warriors become religious fanatics who gain certain benefits in battle. DL7 represents the DL at which this topic affects the developing Tribe (and nobody else).

For purposes of battle calculations, the unit's Combat skill = Combat Skill + (0.5 \* Religion Skill). [The player needs to show this.](#)

## **Frankincense smoking**

### **DL1**

### **Description**

Tribe smokes 1 Frankincense per 500 people once per year for 0.02 morale boost.

Proposed  
Darren Thacker

## **Holy Standard**

**DL 2 (1 shaft, 100 cotton, 200 silver, 5 Gold, 20 people), Mtl2, Weight 5lb,**

### **Description**

The Holy standard increase the morale in combat by 0.05. [The player needs to show this.](#)

One HS per unit is required or one per all units in motc.

Holy standards can be used and transferred only between Tribes that belong to the same Clan.

## **Home Guard (see Combat)**

### **DL4**

### **Janissaries**

#### **DL8**

**Pre-requisite:** Com10 and Ldr10.

### **Description**

A Janissary can only fight as an Infantry unit.

A Janissary incurs an ongoing maintenance cost of 1 Jade paid each year in month 12 as a Transfer. If these funds are not available the Janissary will leave. The effect of the Janissary is effectively that of 2.4 ordinary Infantry and are thus a potent combat unit. Slaves are converted to Janissary and once converted may do

nothing else. Janissary may not comprise of more than 25% of a Tribe's total Warriors. For example, a Tribe with 1200 Warriors may have up to 300 Janissary. If this Tribe were involved in combat it would be able to assign 400 troops to combat. However, up to 300 of these could be Janissaries.

Janissaries and Knights may not participate in the same combat.

## **Knights**

**DL8**

**Pre-requisite:** Heraldry (one Tribe in the Clan), Stables and one of Com10 or Ldr10.

### Description

A Knight can only fight as a Cavalry unit.

A Knight incurs an ongoing maintenance cost of 1 Gold paid each year in month 12 as a Transfer. If these funds are not available the knighthood will lapse for those short. The effect of the Knight is effectively that of 2.4 ordinary Cavalry and are thus a potent combat unit. Warriors are converted to Knights and once converted may do nothing else. Knights may not comprise of more than 25% of a Tribe's total Warriors. For example, a Tribe with 1200 Warriors may have up to 300 Knights. If this Tribe was involved in combat it would be able to assign 400 troops to combat. However, up to 300 of these could be Knights.

Janissaries and Knights may not participate in the same combat (on the same side).

## **Military Orders**

**DL 6/9**

**Pre-requisite:** Fanatic Warriors (Tribe/Clan)

### Description

Once a tribe has completely researched Military Orders, its Fanatic warriors are organized in military focused religious orders. Military Orders are permanent and professional armies and, as such gain additional benefits in battle. DL6 represents the DL at which this topic affects the developing Tribe. DL9 represents the DL at which this topic affects the developing Clan. For purposes of battle calculations, the tribe's Leadership skill = Leadership Skill + (0.5 \* Religion Skill).

## **Missionaries**

**DL3**

### Description

Increases 2 fold the number of Recruits that might be found during Spring Seeking. May be added to Monastery to produce xx fold. Missionaries also double Inactives obtained from a Mission which is a Special hex (if you have one).

## **Monastery**

**DL7, 10,000 stones @ 5 per person, Eng9**

### Description

Increases 5 fold the number of Recruits that might be found during Spring Seeking (the Tribe with the research may seek on behalf of the Clan). The research topic is required in order to use “Monastery”.

### **Theocracy**

#### **DL5**

No Books

### Description

Essentially a Religious State. Upon completion of this research topic the Tribe receives Politics 10. One Clan per Religion may do this.

### **Research**

(Books may not be written)

### **Golden Age**

#### **DL 7**

No Books

### Pre-requisites

1 Scroll and must be done at University co-located with Library.

### Description

Any settled Village, (not a nomadic Tribe). Encouraging a Golden Age is expensive. Once this research topic reaches DL0 it costs 10 Gold per turn (over and above any normal research costs) to continue to seek a Golden Age. Completion of Golden Age allows the Tribe with GA to obtain

1 Category A, 1 Category B and 1 Category C skill may be raised by one each, but not above 8.

Two other research projects being undertaken by the Village, that has reached DL0 or higher, is advanced by one DL but not to completion.

Thus, a Golden Age allows a substantial one-off benefit, but no permanent benefits.

Only one Tribe per Clan may research Golden Age at a time – but once completed may be researched again.

Many ancient and medieval societies enjoyed Golden Ages that were marked by a flowering of the arts & sciences from Athens under Pericles to the Franks under Charlemagne. Historically, almost every Golden Age was supported by large expenditures to encourage the arts & sciences, hence the 300 silver per turn requirement.

### **Research Team**

#### **DL 6**

### Pre-requisites

1 Scroll and must be done at University co-located with Library.

### Description

Once a Tribe has completed Research Team, it gains the ability to initiate a subsequent research project once its prerequisite topic has reached DL1. For example, the research topic “Steel” has “Coke” as its prerequisite. Normally Coke must be completely researched before any attempt to research Steel can be started. Research Team allows Steel to be attempted once Coke has reached DL1. One topic at a time may be dealt with in this way.

Rationale: Research is often done in teams. A “scientist” team focuses upon making new discoveries. An “engineer” team focuses on turning the new scientific discoveries into something that can be used. Once a discovery is made, the “scientists” go on to attempt a new set of discoveries while the “engineers” turn the existing discovery into something practical. In game turns, once DL1 is reached, the scientists go on to the next research topic while the engineers complete the research topic. For example, a Tribe that knows Research Team that also has two (or more) partial topics (For example, Steel DL7/8 and Home Guard DL1/3) could start only ONE new topic early, (e.g. Steel allows Superior Weapons to be started early OR Home Guard allows Army to be started early).

### War College

#### **DL 8**

#### **Gold (10 per annum)**

**Research Pre-requisite:** None – but research must be done while co-located at a University (and is part of it – hence no new building requirements).

### Description

This research topic is valueless unless the Tribe (WC developed in one Tribe cannot service the whole Clan) has already developed Generalship or Military Orders.

A War College represents a deliberate and systematic study of warfare and the training of a tribe’s military leadership in how best to conduct warfare. The prerequisite of Generalship or Military Orders insures that the tribe has possesses permanent military leaders that can then benefit from the training provided by a “War College”.

**Benefits:** Generalship – For land battle calculation purposes only:

Leadership = Leadership + Generalship

Combat = Combat + (Generalship/2)

Horsemanship = Horsemanship + (Generalship/2)

Tactics = Tactics + (Generalship/2)

All other Generalship benefits and restrictions are unchanged

Military Orders - For land battle calculation purposes only:

Leadership = Leadership + Religion

Combat = Combat + (Religion/2)

Horsemanship = Horsemanship + (Religion/2)

Tactics = Tactics + (Religion/2)

All other Military Orders benefits and restrictions are unchanged

Players should tell the GM what their Combat, Leadership etc. skills are for the purposes of each battle, thus it's up to each player to provide the correct data to the GM. If the player doesn't he/she loses all benefit of this research topic.

## Sailing

### Expert Sailors

**DL6**

#### Description

(+3 Seamanship, +3 Navigation).

Expert sailors does not become active unless you are already at skill 10 of Navigation and 10 of Seamanship. Players need to let me know when they achieve this if they do not have 10's in both at the time the research is completed.

## Salting

### Salt Panning

**DL6**

#### Description

The effect is to create a Salt mine in any one Prairie hex that the Clan chooses. This cannot be an existing Village site not can Villages be built in this site.

## Sanitation

### Camp Sanitation

**DL 6**

#### Description

Any active or warrior or slave within the tribe (or any of its element) may serve as sanitation workers for other tribes/elements of the Clan in the same hex. Assuming that 3999 knows Camp Sanitation, this is ordered:

<u>Activity</u>	<u>Commodity</u>	<u>Quantity</u>	<u>People</u>	<u>Note</u>
Sanitation	Sanitation Worker	-	xxx	0999, 1999e1 and 2999

Notes identifies the other tribes/elements being supported. xxx identifies the number of sanitation workers which must equal 0.5% of the total population of the tribes/elements/fleets being supported. Note that

neither the supporting tribe (element) or the tribes/villages/elements/garrisons being supported are allowed to move and that all involved must be in the same hex. All involved must belong to the same clan.

**Benefit:** The supported tribes/elements, for all intents and purposes, have the same Sanitation skill as the Tribe supplying the sanitation workers (useful when under Siege). Supported tribes also benefit from sanitation research topics known by the supporting Tribe. This does not effect population growth. Players need to indicate if changes occur as a result of completing the research.

## Scouting

### Extra Movement1

**DL4**

#### Description

Scouts may move an extra 2 MV points. May not be used for Locating (that is, units with this research may NOT Locate). Can be used for Raiding.

Note: when Elements are created this modifier needs to be added manually – so you will need to let me know.

### Extra Movement2

#### Prerequisites

Extra Movement1

**DL4**

#### Description

Scouts may move an extra 2 MV points (that is, 4 all up). May not be used for Locating (that is, units with this research may NOT Locate). Can be used for Raiding.

### Site SurveyI

(not available under Eng)

**DL4**

#### Description

A detachment of scouts can identify the best part of the hex in which to build your main Village (the Scouts act on behalf of the Clan\*). This allows them to get a very accurate 'feel' for the hex they plan to build fortifications on. Once they have finished researching, they may begin to survey the hex. This would entail measuring the height of hills, digging to find underground rock ledges, etc.

Notes:

1-this research retrospectively “updates” a fortification already built.

2-the bonuses only apply to the Clan with SS research (that is, you cannot build the Fortification for another Clan).

The net effect is to increase the defensive bonus of the site by 10%.

## Seeking

### Bush Lore

#### DL1, DL2, DL3

#### Relic for each

#### Description

The effect of gaining an Bush Lore topic is to add levels to your Seeking Skill. BL1 adds one level (for example, Seek10 to Seek11), BL2 adds 3 levels (for example, Seek11 to Seek14), BL3 adds 5 levels (for example, Seek14 to Seek19). Bush Lore also enables a new Skill (Bush Lore). At BL10 you may research beyond BL20 at the rate of 6 levels per Bush Lore research topic attained. Books may be written.

### Elephants

#### DL3

#### Description

This research allows Seeking of Elephants during Spring 01.

Elephants: equal 60 provs, 6 skins, 12 gut, 12 bones. Requires 2 people to skin, 1 to gut, 1 to bone.

They require 50lbs water, 12 fodder when these are required, for example, in siege, desert, snow etc.

Elephants: carry 1000 unriden (800 ridden by 1 person - or 3 people may ride with no gear)

Uses 10 yards space during siege. 1 herder herds 5.

Elephants may carry (one) Ballistae/Wagons. However, a single elephant may carry only one of these items.

**Note:** Elephants may not carry Wagons/Ballistae into terrain not normally accessible to these items.

If you run out of provs you will eat any animals in the following order: Goats, Cattle, Horses and Elephants.

### Exotic Seeking

#### DL5

#### Description

Seekers can be allocated to seek out exotic and unusual goods according to normal Seeking rules.

Seekers of the exotic will find some unknown amount of a random exotic good. Players may choose 4 exotic items in addition to normal Seeking. Players need to indicate in their Transfer summary from the Seeking table.

### Experienced Seekers

#### DL2

#### Description

Knowing the likely places to look increases Seeking efficiency. Any tribe that is Seeking the same items in the same hex as the previous year and has completed experience Seekers research will get double the seeking return they would normally get. Works before any other Modifiers.

**Seek Herbs (see Healing)**

## **Security**

**Bodyguards**

**DL 4**

**Description**

Bodyguards must number at least 12 Warriors (they are deemed to be dispersed amongst Leaders, Guild Leaders etc). Any sort of an assassination attempt against the Tribe (or any of the Tribe's Elements) receives a 20% penalty. Bodyguards can make use of up to 5 Guard Dogs. Each Guard Dog provides a further 10% reduction. Thus bodyguards with 5 Guard Dogs would reduce a 50% chance of a successful assassination to 20%. One Tribe in the Clan may deploy Bodyguards to other Tribes in the Clan.

**Fast Response Security I**

**DL4**

**Description\*\***

10% of assigned Defenders can act as Security.

**Fast Response Security II**

**DL4**

**Description\*\***

A further 10% of assigned Defenders can act as Security in Battle. FRSI prerequisite.

**Fast response Suppressors**

**DL5**

**Description**

50% of Suppressors may participate in combat, offensive or defensive.

**Guard Dogs (see Herding)**

## **Sewing**

**Brocade**

(new)



## **DL5, Sewing10**

### **Description**

Brocade may be sold for Gold (and other valuable commodities) at NPC towns (not at Fair). 2 people using 10 Silk and 100 Cotton produce 10 Brocade (which will sell for around 5 Gold). Only 2 people per Tribe with Sew10 may produce Brocade each month. The development of the Loom will improve efficiency markedly.

## **Shipbuilding**

### **Felucca Class I**

**DL6 (Ship 8, Wood 8, Mtl 6, logs 250, Brass 75, coal 300, Sheath 200, leather 50, rope 15, cloth 40, Oars, AM's 215)**

### **Description**

A faster version of the Longship - 58MV (Sail), 54MV (Row).

Weight 18000, No ram.

Crew 10 (8+2), Maximum people 40 (or 6000 lbs of cargo on deck with NO livestock) + 1500 cargo below deck.

MEF 6

Damage points: Hull 30, Sails 25

Defense points: 32

Cannot carry Catapults, but [may carry Ballistae](#)

Movement bonus only applicable for fleets composed entirely of Felucca.

## **Shipwright**

### **Increased Productivity I**

**DL4**

### **Description**

25% increase. 3 workers assigned to Shipwright do the work of 4.

Note: this research appears as **ShipW 25** (pls show as this in your Orders)

### **Increased Productivity II**

**DL6**

### Description

2 workers assigned to Shipwright do the work of 4. **ShipW 50**

### Prerequisites

Requires ShipW25

### **Increased Productivity III (ShipW 75)**

**DL8**

### Description

1 worker assigned to Shipwright do the work of 4.

## **Siege Equipment**

### **Catapult**

**DL5**

### Description

**Siege6, 10 log, 30 coal, 2 iron, 4 rope, 15 people**

6 people to operate. weigh 1000 lbs. Treated as Wagon in terms of MV restrictions

The attacking force can only assign 1 Catapult per 20 yards of fortifications\*. Each Catapult uses 5 stones during the combat. The effect is to reduce the defenders defensive factor bonus by 10% at HvyW0 and 20% at HvyW10.

(see under Trebuchet for more details)

\* only one piece of Siege Equipment may be assigned per 20 yards of wall.

### **Trebuchet**

**DL7, 15 logs, 4 rope, 2 iron, 30 coal, 100 stones, 500 Silver, 30 people; Seq7**

### Description

10 Warriors to operate. Cannot be moved from hex in which it is built; weigh 3000 lbs.

They are a powerful indirect firing siege weapon that do damage to Walls. Each Trebuchet uses 5 stones during the combat. The effect is to reduce the defenders defensive factor bonus by  $15\% \times (1 + \text{HW skill}/10)$  (or part thereof). For example, a 120 yard fortification can have a maximum of 6 Trebuchets

assigned and will reduce defensive factor by 20% at HeavyWeapons 10. However, if only 3 Trebuchets are assigned the defensive factor will be reduced by 10%. Only applicable vs walls. Cannot be moved out of hex.



### **Siege Cannon**

**DL 8**

**1,250 Bronze, 7,500 Coal, 10 Logs, 20 Gold, 35 people**

**Weight: 2,000 pounds.**

No Books

#### **Pre-Requisites**

Blasting Powder/Black Powder research\*

Metalwork-8, Seq1 (made under Siege Equipment)

(\*Blasting Powder is a research prerequisite for Siege Cannon, that is, the knowledge to do Siege Cannon requires knowledge of how to make Blasting Power and so Blasting Power research is required by the maker of Siege Cannons.)

#### **Description**

The attacking force must assign at least 1 Siege Cannon per 20 yards of fortifications for full effect. Each Cannon uses 5 Cannon Balls during the combat. The effect is to reduce the defenders defensive factor bonus by  $20\% \times (1 + \text{Artillery skill}/10)$  (or part thereof). For example, a 120 yard fortification can have a

maximum of 6 Siege Cannon assigned and will reduce defensive factor by 40% at Artillery 10. However, if only 3 Siege Cannon are assigned the defensive factor will be reduced by 20%. Only applicable vs walls. Cannot be moved out of hex.

#### Operation Skill:

With completion comes a new skill “Artillery” (which replaces HvyW as the relevant skill). Artillery (Group B), which can be taken by any Tribe in the Clan. That is, if a Tribe in the Clan has completed Siege Cannon then any Tribe in the Clan can take the Artillery Skill.

If the weapon is transferred to another Clan (without Artillery Skill) then HvyW10 is required to fire.

HWpns10 = Artil0

#### To Fire:

1 Jar Blasting/Black powder, Cannon Ball (30 lead). Crew: 10

<https://en.wikipedia.org/wiki/Cannon>

## Skinning

### Slaughter House

**DL3 (200 Logs, 20 Iron, 100 Coal)**

#### Description

Can be researched under Skinning, Gutting or Boning.

A Slaughter House includes fencing, building and tools to increase the number of animals that can be processed by people doing skin/gut/bone. One Slaughter house requires 200 Logs, 20 Iron, 100 Coal. One Slaughter House is required per 100 people using it.

People using a Slaughter House can process four times as many animals as usual.

You would assign four times as many people (that is, use equivalent people) as are allowed by your levels (though they only count as quarter against your people usage). If all are equipped with Knives then the equivalent workers are eight fold. Skin10, Gut10 and Bon10 are all required to use the SH.

## Slavery

### Overwork

**DL4**

#### Description

Slaves can be overworked, they need a overseer with a Whip per 10 slaves (see Leatherwork).

Slaves will be 20% more productive. You need to show the equivalent figure in Orders, and the number of Whips. For example, **120 Slaves** (for 100 plus 10 Whips). No deaths result.

### Press Gang

**DL6**

#### Description

Once per year you send out Scouts with "enslave" orders (1 group per Clan), and they attempt to enslave any locals they run into. A Scout may take one Slave (two with Shackles) up to a maximum of 300 Slaves.

## **Spying**

### **Avoid Security**

**DL5**

#### Research Pre-requisite

Sct 10 and Spy10

Once this research is completed, scouts sent out by this Tribe (or its Elements/Fleets) gain an advantage in avoiding detection by any/all security/suppression orders given by other Clans. The Scouting & Security skill of the other clans is REDUCED by half (rounded up) of the Spy skill of the scouts' Tribe.

For example, Tribe 9933 (with Sct=10 and Spy=10) knows Avoid Security and sends out scouts that enter a hex being suppressed by security forces from Tribe 8222. Tribe 8222 has Sct8 and Sec9. However, Avoid Security means that 8222's SCT=8 is reduced to 4 and its SEC=9 is reduced to 5, when 8222's Suppressors attempts to detect 9933's scouts.

#### Rationale

A Tribe that has mastered both SCT and SPY skills should be able to use its spying capabilities to enhance its scouting. Spies know how to act like local yokels, wandering minstrels, or other "innocents". This research is the training of the Tribe's warrior scouts with the spy's ability to act like an "innocent".

Proposed by

Steve Simmons

### **Cross Training**

**DL5**

#### Research Pre-requisite

Sec 10

#### Description

A Tribe must possess both Sec=10 and Spy=10 skills before it is allowed to attempt this research. Once this research is completed, the tribe's Sec skill is raised by one-third of its current Spy skill and its Spy skill is also raised by one-third of its Sec skill (rounded normally). This research has no other effect beyond this ONE OFF boost of a tribe's Sec and Spy skills.

For example, Tribe 5583 (with Sec=10 and Spy=10) completes Cross Training. Its Sec skill is set to 13 and its Spy skill is also set to 13.

Rationale – Spies that have also mastered SECURITY are better spies as they fully understand security and thus how to avoid the security forces of other tribes. Similarly, Security forces that have mastered SPYING know the tricks spies use and can counter them.

Proposed by

Steve Simmons

### **Identify Home City**

**DL2**

#### Description

Should your attempt be successful your Scouts (that is, Spies) will tell you whether the target has a Home City in the hex in question.

### **Identify Militia**

**DL4**

#### Research Pre-requisite

Identify Home City

#### Description

Identify Militia allows you to roughly determine the number of Militia available to a particular Home City. This is achieved by means of a Scouting party entering the HC hex with orders to “Identify Militia”. The Scouting party gathers no other information and is not subject to any Suppression operating in the hex.

### **Infiltration**

**DL6**

#### Description

Allows an Assaulting (attacking) force to recruit locals “get behind enemy lines” thus reducing the effectiveness of defensive fortifications by 5%. It costs 10 Gold each time it is deployed.

### **Spy Data I\_**

**DL4**

In addition to the data normally gathered by spying (numbers of warriors assigned to defense, security, suppression) two additional pieces of data may be gathered (to within 10% accuracy where this is relevant). The player must specify each of these three additional pieces when the spying is ordered and he/she will receive this additional if and only if the spying mission succeeds (e.g. is not spotted by any suppression or security forces). These two additional pieces of data can be anything that can be easily answered by the GM. For example:

What fortifications does Unit 1789 possess?

What is the population of Unit 1789?

What is the Eng Skill of Unit 1789?

And the answers could be:

Ditch 1,500; Wooden Palisade 1,500; Wooden Towers 4

2,173

8

Please note that additional data gathered through Spy Data I applies to one and only one target and this target UNIT (not entire Clan nor an entire Tribe) is the only UNIT for which the additional data is report. Specifying a Target = 1789, means the additional data is provided for UNIT 1789, but Unit 1789e1 (even if in the same hex), would NOT be reported on. My intent is not to force you to add up the population of every unit with an entire tribe or clan, but rather to focus solely upon ONE, SINGLE UNIT.

## **Spy Data II\_**

### **DL6**

#### **Research Pre-requisite**

Spy Data I

Works exactly like Spy Data described above but allows TWO Units to be targeted and (if successful) provide TWO reports, one for each targeted Unit if and only if both targeted Units are in the same hex. The same two pieces of data are reported for each targeted Unit. For example:

What fortifications do Units 1789 and 2789 possess?

What is the population of Units 1789 and 2789?

What is the Eng Skill of Units 1789 and 2789?

And the answers could be:

1789: Ditch 1,500; Wooden Palisade 1,500; Wooden Towers 4. 2789: None.

1789: 2,173. 2789: 432.

1789: 8. 2789: 4.

## **Stonework**

### **Chisel (see Metalwork)**

### **Scraper (stone)**

**DL4, 1 person, 1 stone, Stn2**

#### **Description**

Coded

Doubles rate for bark stripping.

## **Tactics**

### **Tactical Systems**

**DL 5**

#### **Description**

Once a tribe has completely researched Tactical Systems, it or one of its units, gains an advantage in battle whenever its tactics skill is higher than that of its opponent.

The difference, if positive, between the tactics skill of the possessor of Tactical Systems is added to the possessor's Leadership Skill when determining the results of a battle.

**Counters:** Tactical Systems cannot be used against an opponent who also possesses this research topic.

## **Wagon Laager**

### **DL6**

#### Description

A circle or wall of wagons used by Defenders (only) in the Field

Eastern Europeans and Turks started out with ordinary upturned wagons tied or chained together. In subsequent wars they turned this into an art form and had specific wagons made for the purpose with firing steps, slits etc. Their very badly trained infantry and peasant levies held firm behind these "walls" until way into the 18<sup>th</sup> Century, when enough mobile artillery made them obsolete.

Historically the army would seem to line up in the traditional manner, cover would then be taken up in a matter of minutes. In the context of the game, on a first encounter the opposition will be unaware and submit normal combat orders. Later on ...they will have to guess!

Not in mountains, Forests or Jungle.

1 wagon must be available per 10 Warriors. The effect is to increase TP by +4 when the unit has an order to "defend".

## **War Games**

### **DL7**

#### Description

180 (or more) Warriors may engage in War Games 3 times per year, that is, once every 4 months (requires 1 turn). Each Warrior must carry a weapon, a missile weapon and at least 2 pieces of metal armour. Losses of warriors = 20 minus Com Skill (the player should list the losses). They may do this from the Tribe or via an Element. Successful completion of the War Games results in a Terrain Proficiency for the hex in question.

## **Triball**

### **Triball Arena**

**DL 5 (Engineering 8, Triball 10 or Engineering 10, Triball 8), 15,000 stones.**

#### Description

During each fair the owner of a triball arena gets a **50% bonus** to the silver that they get from Triball. Think of the bonus as sales from concessions, etc. A Triball arena can be built for another Clan.

### **Triball Specialists**

#### **DL 4**



### Description

A triball specialist is a warrior that has trained extensively to play triball. During fair months they cannot do anything else. They must play triball. During the other months they may guard or do warrior only acts or they may herd triball ponies. They are counted **as 2 warriors** for purposes of figuring silver gained at the fair. You can have a maximum of 800 Triball specialists participate in the fair.

## **Torture**

**Dungeon (see Engineering)**

### **Thumb Screws**

**DL3, 1 person, 1 Iron, 2 Coal, Met4**

### Description

Increases the memory capacity of a Torturer's clients.

### **Treachery1**

**DL1**

### Prerequisites

Dungeon

### Description

Under more sustained and sophisticated torture a client will prefer to name "sympathisers" in the local area rather than pain and death.

Treachery 1 DL1.

You may convert up to 5 Warriors into Torturers (once per year). An Element of Torturers (1) plus at least 50 Warriors mounted with Whips and 100 Shackles capture a likely suspect from the local population, interrogate him/her allowing the detention of 100 identified suspects indefinitely (that is, as Slaves).

Allowable once per year. The Element must operate (move to) at least 12 hexes from its Home City/Meeting House and cannot operate in any "Special" hex belonging to the Clan or in any politically controlled hexes belonging to allies (including Truced players). A special Element beyond Adm requirements may be created for the purpose.

### Progression (under development)

Treachery 2 DL2. Same only 2 torturers, 200 warriors and 200 detainees.  
Prerequisite Dungeon and Treachery 1. Allowable once per year.

Treachery 3 DL3. Same only 3 torturers, 300 warriors and 300 detainees.  
Prerequisite Dungeon and Treachery 1 & 2. Allowable once per year.

*Treachery 4 DL4. Same only 4 torturers etc and requires companion research of the [Rack](#).*

*Treachery 5 DL5. Same only 5 torturers etc and requires companion research of [Thumb Screws](#).*

*Treachery 6 DL6. Same only 6 torturers etc and requires companion research of [Water Torture](#).*

*The Inquisition (DL8 maybe) - a group of torturers can... Probably requiring Treachery 3, Rel10 maybe?*

## **The Rack**

**DL5: 20 Iron, 10 Logs, 200 Silver, 6 people (Wood 5), weight 200 lb**

### Prerequisites

Treachery 3

### Description

Assists in developing treacherous attitudes amongst the Locals.

## **Weapons**

### **Crossbow**

**DL6, 5 iron (or bronze), 40 (30) coal, 1 string, 30 Silver, 4 people; Wpn8**

### Description

Weapon Activity

Crossbows are heavy arbalests; they may not be made in desert or arid terrain. Weighs 6 lbs with normal missile range.

### **Katana**

**DL8, 5 Iron, 40 coal, and 3 people**

### Description

The folding process makes the Katana sharper than normal sword. Katana is equivalent to a Steel Sword (and may be shown as this in your Report).

<https://www.quora.com/What-was-the-superior-sword-the-European-longsword-or-Katana>

### **Scimitar**

**DL8, 5 Steel, 20 Coke, 1 Gold, 20 Silver, 1 Ivory and 3 people**

### Description

Curved Sword with a nice Ivory hilt used by Cavalry. A maximum of 30 people in the Clan per turn may be assigned to the making.

## Ulfbeht sword

**DL8, 5 Steel, 30 Coke, 2 Gold, 40 Silver and 4 people**

### Description

Top of the shelf sword used only by Infantry. A maximum of 40 people in the Clan per turn may be assigned to the making.

<http://weaponsman.com/?p=11630>

## Weaving

### Basket

**DL3, Wv4, 5 Bark, 5 Gut, 1 person.**

### Description

A basket **can double** the productivity of farmers harvesting any/all crops. That is, increases the number of effective workers by 100%. May be combined with any other harvesting implement allowed for the type of crop being harvested (e.g. scythe, machete but not Harvest Bag); however the effect is linear, not cumulative (e.g. a farmer with both a scythe and a Basket will harvest 9 acres of grain, not 12). Thus a farmer with Scythe and Basket is shown as 3 equivalent Farmers. A Tobacco Farmer with Basket and Machete would be shown as 5 equivalent workers (not 8). It is **incumbent on the player** to show equivalent workers in Orders.

### Epic Tapestry

**DL6**

**5000 cotton, 500 silver, 50 gold, 5 diamonds.**

### Description

0.04 Morale to owning Clan, -0.05 Morale if lost/destroyed. Bonus 0.06 Morale if in combat.

Proposed by  
Max Nieuwenhuizen

### Exotic Weaving

**DL 4, Art6**

### Description

Exotic Weaving is a Village Activity (only one Tribe per Clan). Exotic Weavers may create Carpets, Rugs and Tapestries, incorporating techniques and legends unique to the region, for example, Cyberian Carpet. Each Clan can select one unique item.

When sold at Exotic Trading Posts on the your continent, the items are nothing special and sell for the same price as normal Rugs, Carpets, and Tapestries (with the same limits as per a Fair). However, if sold at an Exotic Trading Post on another continent, these Rugs, Carpets, and Tapestries bring twice the normal price (in Silver) or may be sold for Diamonds. If sold for Diamonds, the twice normal price in Silver is divided by 300, rounding down, to get the amount of Diamonds.

If using Silk instead of Cotton these prices are **tripled**.

There are Exotic Trading Posts that buy Exotic Woven items on other Continents.

ITEM	SKILL	PEOPLE	COTTON/ SILK	SILVER
Carpet	6	12	50	10/20
Rug	4	6	20	20/40
Tapestry	8	25	100	25/50

Once three Tribes have completed Exotic Weaving they will be considered to be members of the Exotic Weavers Guild (an exclusive Guild). At this point the Guild must elect a Guild leader who must place a paper Element in Shanghai (without a Guild leader the Guild will collapse but may be re-established any time a leader comes forward). This Element may trade as a Shanghai Element but may only deal in exotically woven goods. Should further Tribes develop the research membership in the Guild will be determined by Auction (Gold) once per year for the year. A Clan may not belong to more than one exclusive Guild.

**Loom**  
(new)

**DL6**  
**(10 Logs, 10 Ropes, 100 Parchment, 50 Iron, Bronze or Brass, 1000 Silver)**

**Description**

Workers using a Loom can produce Brocade which may be sold for Gold (and other valuable commodities) at NPC towns (not at Fair). 2 people using a Loom can turn 100 Silk and 1000 Cotton into 100 Brocade (which will sell for around 50 Gold). It is unlikely that any one town will have such demand but the buying of 20-40 Brocade will be usual. Only 2 people per Tribe with Sew10 may produce Brocade each month.

**Whaling**

**Whaler**

**DL6**

**Description**

Increases size of catch (but not the chances).

	ShipB	Wood	Mtl	Logs	Brass	Coal	Sheath	Silver	Leather	Cloth	Rope	O/P	AM's	Weight
Whaler	9	8	7	160	40	200	150	3000	30	15	20	O	160	20000

Sail Movement							Row Movement									
Vessel Type	MP	Nav	Sea	Sail	Crew	M P	Nav	Sea	Row	Crew	MEF	Sail	Hull	Max People	Def Pts	Cargo@
Whaler	20	2	2	4	10+7	15	.5	.5	2	20+7	4	16	16	60	16	20000

## Woodwork

### Roman Crane (also Engineering)

#### DL7

People 6, Rope 10, Logs 20, Iron 40 Woodworking-10 & Engineering-8

#### Description

Description: wood crane comprised of a modest size boom, a base plate, and a large diameter barrel shaped "wheel" on its side built around and attached to a centre axle (like a hamster wheel). One or more people walk inside the wheel providing mechanical power to drive the winch and thereby raising or lowering loads.

Benefit: Increase worker productivity by 50% on Engineering projects and Shipbuilding so 2 workers do the work of 3. Each crane enables up to 20 workers to gain benefit. The Crane applies to raw workers that is, before other items such as Wheelbarrows. Player must [show equivalent](#) workers in their orders. Cranes are inventory item and transportable once constructed and thus may be used by Clans without the research.

Proposed by Brian Whitesell

### Scaffolding (see Engineering)

#### Wain

DL4, 15 logs, 15 people; 4 animals to pull, Wd4, weighs 600 lbs

#### Description

Woodwork Activity

Holds 5000 lbs (2500 when scouting). Has same restrictions as Wagons.

#### Wheelbarrow

DL4, logs 2, people 2, Wood5, weighs 50 lbs.

#### Description

Woodwork Activity (only)

Coded

A worker with a wheelbarrow increases Mining, Engineering output by 50%. Doubles Quarrying output.

## Notes

Topics such as Fanatic Warriors (and others that relate DL level to the recipient) cannot be changed once commenced. For example, if you have commenced FW and are DL3 of 7 for the Tribe, you cannot then decide to change this to DL3 of 9 Clan wide. Clan wide must be commenced as a separate project. However, Tribe wide is not a prerequisite for Clan wide so you can begin your research by going straight for Clan wide or Religion wide.

## Capped Topics

[See Tribe News](#)

## Scrolls/Relics

These will be required for some topics. A Scroll is more likely to be required for items that use materials, a Relic for items that do not. Scrolls and Relics are found around the hexes, but they are rare.

## Restricted Topics

When introduced these will be available only to Clans that have started the game more recently and/or be specific to Continents.

## Orders for Research Attempts

Showing Research Topics that are yet to be started in **Red** is a big help to me. Your Orders might look something like this (the serious researcher will eliminate text in grey altogether):

Tribe	Primary	Secondary	Research (with University)
0500			Politics: Government Level 3 (DL2 to DL3) Engineering: Stone Wall 25' (DL1 to DL2) Leadership: Leadership 11 (DL3 to DL4) <b>Research: Attempting: Research Team</b> <b>Religion: Attempting: Divine Aid</b> <b>Politics: Attempting: GL3</b>
1500			Apiarism: Breed New Queens (DL4 to DL5) <b>Refining: Attempting: Coke</b> <b>Forestry: Attempting: 6 Logs per</b> <b>Dancing: Attempting: Springs Arts Festival</b>
2500			Quarrying: 7 stones per person (DL2 to DL3)
3500			Economics: Market Place (DL3 to DL4) Herding: Herding 11 (DL0 to DL1) <b>Religion: Attempting: Rel11</b> <b>Music: Attempting: Springs Arts Festival</b>

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