

August, 2003

Notes from Hades

These days, vacation is something of a mixed blessing. It's nice not to have to go to work, but then dealing with two 16 ½ month-old toddlers can be an incredible amount of work. It doesn't help that they both seem to be exhibiting some "terrible two" type behavior (mainly temper tantrums and screaming) rather early. They're not really that bad, but they do have an incredible amount of energy, and it's exhausting just trying to keep up with them. I don't know how Celeste manages to do it on her own.

This issue, Dog Show ends. Congratulations to Dennis Cain on his victory.

I have persuaded Andy Lewis to give us a report of the recent WBC convention. Hopefully, it will appear in the next issue.

The next deadline is **Tuesday**, **September 16 at 5:00 p.m. Pacific Time.** Please note that games that are run by guest GMs or in a subzine could be on a different schedule, so look at the games themselves. **Please do not call or fax orders after 10:00 p.m. Pacific time.** My wife and I tend to retire early.

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Game Openings

Dogwood. History of the World. This will start when Dogface ends. Have Dave Anderson, Forest Cole, Kevin Wilson, Andy Lewis, Dennis Cain, and Chris Geggus. This game is closed.

Retriever. Outpost. This will start when Wolfbane ends or when I get 10 players, whichever comes first. Have Eric Brosius, Andy York, Andy Lewis, Dave Partridge, Bill Scharf, Kevin Wilson, Michael Lowrey, and Cary Nichols, will take up to 2 more.

Gray Wolf. New World. Have Andy York, Dennis Cain, Bob Robles, Cary Nichols, Andy Lewis, and Dave Partridge. Starts this issue!

Salty Dog. Seafarers of Catan. We will be playing the Oceans scenario. Have Kevin Wilson, Dave Partridge, Cary Nichols, Bill Scharf, and Chris Geggus, will take up to 2 more.

Laika. Liftoff! This is a playtest of the Mars Landing Variant I have devised. The link to the rules is on the main page of the website (I can send you a hard copy if you don't have web access). Have Andy York, Cary Nichols, Dennis Cain, and Bill Scharf. Starts this issue!

Doberman. Industrial Waste. This game will start after Junk Yard Dog ends. Have Bill Scharf, Eric Brosius, Dave Partridge, and Richard Weiss. Dave is willing to defer to anyone who is not in the Junk Yard Dog.

Wish List

Age of Renaissance. This game will start after Dog Show ends. Have Bob Robles, Cary Nichols, and Caleb Cousins, need up to 3 more.

Machiavelli. This game will be a gunboat game and will start when the next Machiavelli game finishes. Scenario and rules by player vote. Have 2, will take up to 6 more. This box will be checked \Box if you are signed up.

In general, game ownership is recommended, but not required.

Note that a subscription to S.O.B. is not required to play in a game run by flier, but that a game fee will be charged to non-subbers.

S.O.B. is a zine of unusual postal games, and anything else I feel like including. Your publisher is:

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On the Web at: http://home.adelphia.net/~chassler Subscriptions cost \$1.50 per issue (\$2.25 overseas).

Howling at the Moon The S.O.B. Letter Column

Andy York

Sounds great on the certification of your back yard. It must be fun to watch all the critters visiting. Do you take pictures for a "family" album?

[All too frequently, they're off before we can get a camera ready. But, to be honest, we haven't really been trying.]

Bob Robles

I hope you and your family have had an enjoyable summer so far. I was just in lovely Orange County this past week. My oldest daughter's water polo club was playing in the junior Olympics. A fast, fun sport even if I don't understand the game. Orange County and the LA basin in general looks much nicer than when I was in college in the late 70s and early 80s. One book to review, 'Storm of Steel' by Ernst Junger. A World War I memoir from a German soldier who fought throughout the entire Great War. An opposite tone compared with "All Quiet on the Western Front". This book has been criticized, somewhat unfairly IMHO, of being triumphalist and glorifying war. Even for an officer as obviously gung ho as the author, one reads of the war weariness which creeps in, in the continuous casualties, and the strokes of luck which separate the lucky and the dead. Highly recommended.

S.O.B. Off the Leash

Advanced Game, Plague, Famine, Special Military Units, Conquest, Moneylenders, Gray Press, Ultimate Victory, Gunboat Miller Number 2001Fpw10

Spring 1460

Deadline for Summer 1460: 9/16 Tuesday

The clash of the titans begins in earnest as France and Venice both bring significant power to bear on taking Modena, with neither succeeding. Naples gives Florence reason for annoyance, and Austria slaps away Venice's proffered olive branch.

Cost

Fall 1459 Retreats

Austria retreats A Carniola to Slavonia Naples retreats A Florence to Pisa Turks retreat A Croatia OTB

Builds

Aus	Maintains all, no new builds	9
Flo	Maintains all, builds G Florence	9
Fra	Maintains A Milan, A Como, A Pavia, A Parma, A	18
	Saluzzo, F Lucca, F Ligurian Sea, F Gulf of Lions, no new builds	
Nap	Maintains A Spoleto, A Aquila, F Bari, F Tyrrhenian Sea,	24
	F Messina, F Tunis, builds F Naples, G Bari	
Ven	Maintains A Friuli, A Carniola, A Cremona, A Mantua, A	33
	Bologna, F Croatia, F Dalmatia, F Albania, F Genoa,	
	builds A Treviso, A Padua	
	<u>Expenditures</u>	
France	buys Famine Relieve in Milan for 3 ducats.	
	Outstanding Debt	

Fall 1461: 9 ducats due from Venice.

Orders

- AUSTRIA : <u>A AUSTRIA to Carinthia</u>, <u>A CARINTHIA to Verona</u>, A SLAVONIA supports A Austria to Carinthia
- FLORENCE : A Florence to PISTOIA, A Sienna to PISA, G FLORENCE converts to A
- FRANCE : A Como to MILAN, A Milan to BERGAMO, A PARMA supports F Lucca to Modena, A Pavia to FORNOVA, A Saluzzo to SAVOY, <u>F</u> <u>LUCCA to Modena</u>, F LIGURIAN SEA supports F Lucca to Modena, F GULF OF LIONS supports F Ligurian Sea
- NAPLES : A SPOLETO Supports A Aquila to Ancona, A Aquila to Ancona, F Naples to TYRRHENIAN SEA, F Bari to OTRANTO, F Tyrrhenian Sea to PATRIMONY, F Messina to GULF OF NAPLES, F Tunis to CENTRAL MEDITERRANEAN
- VENICE : A CREMONA holds, <u>A MANTUA to Modena</u>, A BOLOGNA supports A Mantua to Modena, A FRIULI supports A Carniola, <u>A</u> <u>CARNIOLA</u> supports Austrian A Carinthia holds (nso), <u>A</u> <u>TREVISO to Verona</u>, A Padua to FERRARA, F GENOA supports A Mantua to Modena, F CROATIA supports F Dalmatia to Upper Adriatic, F Dalmatia to UPPER ADRIATIC, F Albania to DURAZZO

Spring 1460 Famine Losses

French F Lucca, Naples A Spoleto, and Venice A Mantua all are destroyed by famine

Summer 1460 Plague

Good year: No plague!

Austria – France: I hope you supported me as you said. This Venetian is getting far too big now Papacy, Turks and Milan are dead. We must stop the brown smog from covering the land!

Press

Austria – Venice: I am happy to ally with you against France if you stop attacking me. Until you do I have little choice but to stick with the Yellow Peril and attack you. So, prove your trustworthiness and I will support you happily.

France – **Austria:** Trent is yours finally. After you must move south (Venice is going for a solo win), if you want to survive and to receive all my support (let you ask where: Carinthia, Verona?). Please, let you also leave Tyrolea in my hands: it borders with four my provinces and I cannot leave it to you. Any way, if you leave Tyrolea to me, but need 1 or 2 ducats to maintain or build units next winter, I shall give them to you in fall, or winter itself.

France – Florence: Well, you are in again, I hope; as you can see, Venice is going for a solo win and he takes 16 ducats more of me and Naples any winter and can borrow other 19 ducats to buy one enemy unit at any turn. As I just said in previous messages, I left your Lucca and hope that you wish to occupy and defend it from Venice. A big cooperation between us is needed to avoid the Venetian end of the game. Let you do not leave him to destroy me: after you cannot do anything more.

France – **Naples:** Dear friend, it seems that finally Venice went out with his intentions against you and me by supporting Florence and by attacking my Genoa. Besides his attempt to go for a solo win is very clear; he takes 16 ducats more of each of us any winter and can borrow other 19 ducats to buy one our unit at any turn. I propose peace and sure boundary between us, the actual ones and hope that Florence would join us to avoid the winning of Venice. It is very important that you attack Venetian provinces on the east coast and in UA and LA, while I shall engage him in Genoa and in North Italy. Again I affirm that actual positions in west seas are optimal for me (and I hope for you) and that I shall not enter WM and TS never, but it is necessary that you intervene against Venice immediately by not leaving him to destroy me: after you cannot do anything more.

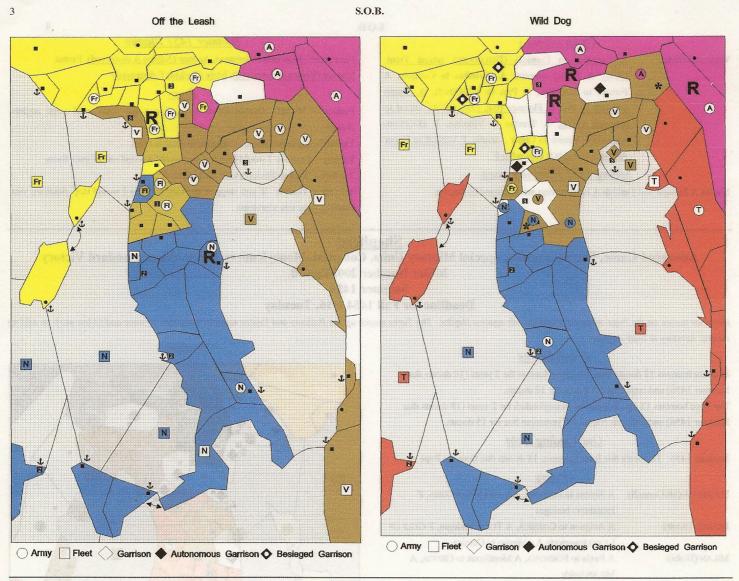
France – **Venice:** Unfortunately I cannot permit your solo win and hope that other players understand early this your wishes to destroy me in order to having free hands to terminate the game.

Venice – Austria: So, has France mentioned returning TYR to you yet? Note that I am not fighting you. Would you enjoy support to MIL? Will support car-mil.

Venice – Florence: My support got you back in your capital. Note my continual support of you. If you want to move north from now on I will sit back and support it.

Venice – France: My attack is a momentary setback to you, especially since you are about to conquer Milan and you will retake Genoa. So I slowed you down but you will soon be back to behemoth status.

Venice – Naples: We have been at peace for some time, let's not spoil it. Note my debuild so as to not threaten you. Please back off from BOL though.



Wild Dog

Advanced Game, Plague, Famine, Special Military Units, Conquest, Moneylenders, Black Press, Ultimate Victory Miller Number 2002Fpw10

Spring 1457

Deadline for Summer 1457 9/16, Tuesday

France goes after autonomous garrisons while launching an amphibious invasion against Venice. Austria attacks Venice to regain a home province. Naples moves north to attack Venice and the Turks continue their battle with (you guessed it) Venice for control of the Upper Adriatic.

Orders (cont.)

B	71	3	1	1	Ŀ

		Cost	FRANCE (Partridge):	A SAVOY besieges, A TURIN besieges, A MODENA
Aus	Maintains A Austria, A Hungary, builds A Tyrolea	9		besieges, A Marseilles to PISA, F GULF OF LIONS
Fra	Maintains all, builds A Marseilles	18		transports A Marseilles to Pisa, F LIGURIAN SEA
Nap	Maintains all, builds A Naples	24		transports A Marseilles to Pisa
Tur	Maintains all, builds A Albania	18	NAPLES (Scharf):	A Sienna to AREZZO, A Patrimony to PIOMBINO, A
Ven	Maintains all, builds A Treviso, G Venice	27		PERUGIA supports A Sienna to Arezzo, A Spoleto to
	Outstanding Debt			URBINO, A ANCONA supports A Spoleto to Urbino, A
Summe	r 1457: 26 ducats due from Austria			NAPLES holds, F GULF OF NAPLES supports A
	Orders			Tyrrhenian Sea, F TYRRHENIAN SEA transports A
ALISTO	IA (Wilson): A Austria to CARINTHIA, A Hungary	to SLAVONIA A		Patrimony to Piombino
AUSIK	TYROLEA supports A Austria to Carinth	Bestell Manual	TURKS (Narhi):	A CROATIA supports F Carniola, A Albania to
	I IROLEA Supports A Ausura to Carmin	la		HERZEGOVINA, F ISTRIA to Upper Adriatic, F
				CARNIOLA supports F Istria to Upper Adriatic (cut), F
				LOWER ADRIATIC supports F Istria to Upper Adriatic, F
				Sardinia to WESTERN MEDITERRANEAN

Orders (cont.)

Adriatic, G VENICE convert to F

Spring 1457 Famine Losses

Naples A Perugia and Turkish A Herzegovina are destroyed by famine.

A Carinthia to Carniola (DISLODGED, retreat Trent,

OTB), A FRIULI supports A Carinthia to Carniola, A

Ferrara to MANTUA, A Pisa to FLORENCE, A Arezzo

supports A Pisa to Florence (cut, DISLODGED, retreat to

garrison, OTB), A Treviso to VERONA, F BOLOGNA

supports F Venice to Upper Adriatic, F VENICE to Upper

VENICE (Whyte):

S.O.B.

Summer 1457 Plague

4

Poor year – Row only. Bergamo, <u>Ancona (Naples A destroyed)</u>, Parma, Mantua (Venice A destroyed), Istria (Turkish F destroyed)

Press

France – World: Anyone know where I can get some used seige engines cheap?

Turkey - Austria: I see a resurgence of Austria soon.

Turkey - France: I would love it if you would disband one of your fleets.

Turkey - Naples: Sticking with the long haul.

Turkey – Venice: If you stopped growing so large I would stop attacking you. Frankly, your size scares me.

Shepherd

Advanced Game, Plague, Famine, Special Military Units, Conquest, Moneylenders, White Press, Standard Victory Miller Number 2003Epw10

Summer 1454

Deadline for Fall 1454 9/16, Tuesday

Florence moves on the Pope while the Pope guards against Naples. The Turks march up the Balkans and Venice move to meet him. France and Milan work on adding neutral territory to their empires.

Expenditures

Florence borrows 12 ducats from the moneylenders for 2 years (18 ducats due Summer 1456) and buys Papal A Lucca for 18 ducats.

The Pope borrows 12 ducats from the moneylenders for 2 years (18 ducats due Summer 1456) and disbands Naples F Tyrrhenian Sea for 15 ducats.

Outstanding Debt

Summer 1456: 18 ducats due from Florence, 18 ducats due from the Pope

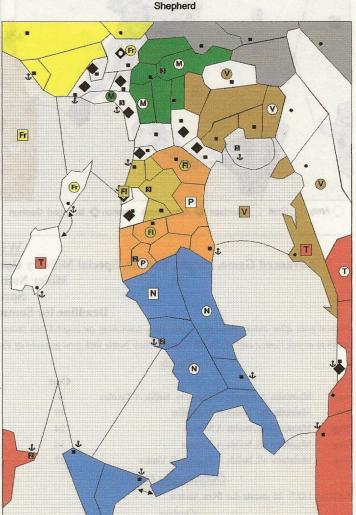
	<u>Orders</u>
FLORENCE (McConnell):	A Arezzo to PERUGIA, A Lucca to BOLOGNA, F
	PIOMBINO besieges
FRANCE (Scott):	A Avignon to CORSICA, A TURIN besieges, F GULF OF
	LIONS transports A Avignon to Corsica
MILAN (Biehl):	A Pavia to FORNOVA, A Montferrat to GENOA, A
	MILAN holds
NAPLES (Cole):	A AQUILA to Ancona, A Otranto to SALERNO, F
	CAPUA to Rome, F Tyrrhenian Sea supports Turkish F
	Western Mediterranean to Sardinia (nsu)
PAPACY (Robles):	A Lucca besieges (nsu), A ROME holds, F URBINO to
	Ancona
TURKS (Nichols):	A Herzegovina to BOSNIA, F Lower Adriatic to
	DALMATIA, F Western Mediterranean to SARDINIA
VENICE (Giovine):	A Ferrara to CROATIA, A Verona to FRIULI, A TRENT
	holds, F UPPER ADRIATIC transports A Ferrara to
	Croatia

Your treasury:

Press

France - Turk: You need to write us to get allies.... your lack of e-mail will hinder better communications. Till you attack this way I will be your friend and ally....

Ailan - Florence: Hang in there.
Ailan - France: Promises.
Ailan - Papacy: Twill avail you naught to go north.
Ailan - Venice: I am perplexed by your actions.
Rome - Naples: No blessings for you!
urks - Nanles: Received your courier and I concur



Army Fleet Garrison Autonomous Garrison Besieged Garrison

Warg Miller Number 2002Ets33

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3019-4-П

Deadline for 3019-5-I 9/16, Tuesday

Gandalf and Aragorn help the Elves fight off Saruman, while Rohan puts the Lord of the Nazgul on the run. Umbar manages to hold its own against the Mordor onslaught and Gondor gains versus Mordor, but loses to Saruman. The Dwarves manage to hold onto the status quo.

),

3019-4-I Retreats

Elvish A Bree retreats to Fornost Erain

Gondor A Lamedon retreats to Dol Amroth

Rohan A Eastfold retreats to Anorien

Umbar A Khand retreats to Haradwaith, kills Gondor ranger

Umbar C South Gondor retreats to Poros

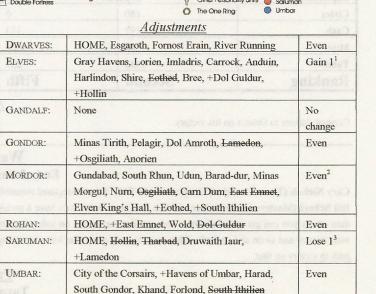
Orders

- DWARVES (Reynolds): <u>A FOROCHEL to Carn Dum</u>, A NORTH DOWNS supports Elvish A Fornost Erain to Bree, A WITHERED HEATH supports A Esgaroth, A NORTH RHUN supports Rohan C Dagorland to South Rhun, A RIVER RUNNING supports A Esgaroth, Dain leads A ESGAROTH hold
- ELVES (Koehler): <u>A SHIRE supports A Fornost Erain to Bree (cut)</u>, A Fornost Erain to BREE, A Rhuadur to HOLLIN, A High Pass to RHUADUR, A ANDUIN supports A Dol Guldur, A DOL GULDUR holds, <u>A Eothed supports A Northern Mirkwood to Elven King's</u> <u>Hall (DESTROYED)</u>, <u>A NORTHERN MIRKWOOD to Elven King's</u> <u>Hall (paralyzed), F HARLINDON to Gulf of Lhun, R ()</u>
- GANDALF (Bolduc): R () to Carn Dum ELIMINATED, R (),
 - Fe (

Aragorn leads Elvish A Rhuadur to HOLLIN, Gandalf SHIRE supports Elvish A Fornost Erain to Bree

- GONDOR (York): Faramir leads 3A Caer Andros to OSGILIATH, <u>A DOL</u> <u>AMROTH to Lamedon</u>, C DOR-EN-ERNIL supports A Dol Amroth to Lamdeon, F ANDUIN supports 3A Caer Andros to Osgiliath
- MORDOR (Anderson): Sauron leads A ERED LITHUI supports A South Rhun, A SOUTH RHUN holds, <u>2A Khand holds (DISLODGED, retreat Nurn, Near Harad, Far Harad, OTB)</u>, A UDUN holds (u), <u>A Osgiliath supports 2A South Ithilien (cut, DISLODGED, retreat Minas Morgul, North Ithilien, OTB)</u>, 2A SOUTH ITHILIEN supports A Osgiliath, <u>Lord of the Nazgul leads A Eastfold to Anorien (DISLODGED, retreat Entwash, OTB)</u>, A Angmar to FRAMSBURG GAP, 2A Gundabad to CARN DUM kills Gandalf ranger, Nazgul OLD FOREST ROAD paralyzes Elvish A Northern Mirkwood, 4A Elven King's Hall to EOTHED
- ROHAN (Scharf): A Anorien to EASTFOLD, A WESTFOLD supports A Anorien to Eastfold, A DUNHARROW supports A Anorien to Eastfold, <u>C DAGORLAND to South Rhun</u>, C Celebrant to Wold to EAST EMNET, Eowyn (), Theoden DUNHARROW holds
- SARUMAN (Robles): Saruman leads A LAMEDON holds, A Anfalas to DRUWAITH IAUR, <u>A Bree supports A Tym Gorthad to Shire (cut,</u> DISLODGED, retreat Weather Hills, OTB), <u>A TRYN GORTHAD to</u> Shire, <u>A Hollin to Rhuadur (DISLDOGED, retreats Cardolan, Ninen-Eleph, Khazad Dum, OTB)</u>, A ISENGARD holds
- UMBAR (Nichols): A HARADWAITH supports C Poros to Khand, A HARAD supports F South Gondor, A NURIAD supports C Poros to Khand, C Poros to KHAND, F SOUTH GONDOR holds, <u>F FORLOND to Gulf</u> of Lhun, F City of the Corsairs to HAVENS OF UMEAR





¹ Builds 2 since A Eothed was destroyed.

² Depending on retreats, builds range from even to build 4

³ Depending on retreats, builds range from remove 1 to build 1

Alignment

Press

Good: Dwarves, Elves, Gandalf, Gondor, Rohan Neutral: Saruman, Umbar Evil: Mordor

Saruman - All: I'm really neutral ... really!

Sauron - Dwarves: You forgot I also just Yada, Yada, Yada. Sauron - Umbar: You have but one choice, take Grey Havens and get a build or just slowly die on the vine. Aren't your fleets supposed to be out at sea.??? Umbar - Elves: A beginner's mistake. I'm trying to leave through the Gulf. Umbar - Gondor: You're next on the overlord's list. We need to work together against all evil forces. Your ranger weakens that alliance.

Dog Show

S.O.B.

Final Card Play Deadline for End of Game Statements: 9/16 Tuesday

Final Cardplay

Genoa plays Spice (Barcelona and Paris each gain \$9, Venice gains \$36, and London gains \$144)

Venice plays Silk (Paris gains \$8, and Venice, Barcelona, and London each gain \$32), and Galileo Galilei (gains \$30 in rebates) London has no cards.

Barcelona plays Sir Isaac Newton.

Paris plays Ibn Majid (gains \$30 in rebates), Spice (Barcelona and Paris each gain \$9, Venice gains \$36, and London gains \$144), Metal (Paris gains \$24, Barcelona gains \$54, and London gains \$96), and Ivory/Gold as Ivory (Genoa gains \$40 and Paris gains \$90) The Planane

	<u>Ine Flayers</u>						and the second se	
Player	Country	Misery	Tokens	Money	Order	Dominance	Ships	Advances
Caleb Cousins	Paris	80	and the	\$292	5	13	1-0	A, B, C, D, E, F, I, J, K, N, O, P, Q,
1 Summers	S-2-123	a far an an	2.		- gring	D. and A. weller	lost A de	R, S, T, V, W, X
Ward Narhi	Genoa	400	1. 1	\$179	1	8	8	F, H, I, J, K, L, M
Paul Bolduc	Venice	70		\$250	2	17	1-0	A, B, D, E, F, H, I, J, K, N, O, P, R, S,
1	ALL BALLER		and the second			Y James R (1300 42	T, V, W, X
Bob Robles	Barcelona	150	1990 - S.	\$290	4	13	10	A, F, G, H, I, J, K, L, N,O, S, V, W
Dennis Cain	London	30		\$653	3	12	3-0	A, B, C, D, E, F, G, H, I, J, K, L, M,
		Sec. 1			6			N, O, P, Q, R, S, T, U, V, W, X, Y, Z

Players are listed in tie breaking order.

LA	San Star	<u>Fina</u>	<u>el Points</u>	the second second second	and the second
	Paris	Genoa	Venice	Barcelona	London
Science	300	0	210	20	300
Religeon	90	180	210	280	300
Commerce	110	300	110	110	300
Communications	300	0	180	90	300
Exploration	240	. 0	240	80	400
Civics	180	0	180	80	500
Cash	292	179	250	290	653
Misery	-80	-400	-70	-150	-30
Total	1432	259	1310	800	2723
Ranking	Second	Fifth	Third	Fourth	First

Notes

Congratulations to Dennis on his victory.

Watchdog

End of Game Statements

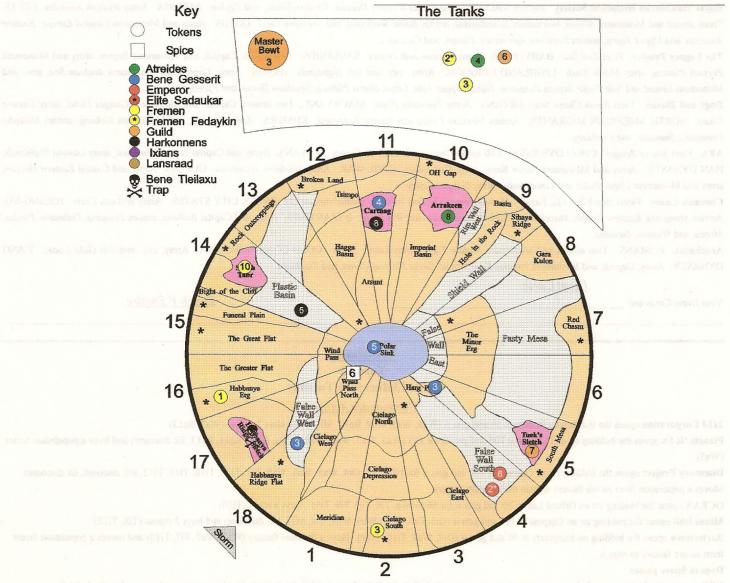
Cary Nichols (Texas Combine) Congrats to MOTAS. I'd also declared manned lunar landings, but he always stayed a step or three ahead of me. On to Mars! Bill Scharf (Masters of the Universe) I like this game but it does have a problem. There is really only one "best" strategy... and once you start getting more money than others you can get more advances and spend more money on safety factors... which means your more likely to complete additional missions first and get even more money and so on and so forth. This isn't the only game that has a "catching the leader" problem ... I'm looking forward to Chris' variant ... nobody knows the best path to victory on that ...

				Pavlov			
				Turn 6 Nexu	15		
		logonal	Furn 6 Bidding	g and Movemen	t due: 9/16 Tu	unchau	
				Players		Exercity we provide the	
TREIDES:	Cary Nichols	Bene Gesserit	Bob Robles	BENE TLEILAXU	Paul Bolduc	Emperor	Bill Scharf
REMEN	Steve Koehler	GUILD	Kevin Wilson	HARKONNENS	Ward Narhi	GAME MASTER	Chris Hassler

	Turn 6			Positions		
	Nexus		Atreides:	8 tokens Arrakeen, 4 tokens in the tanks, 8 token	s off-planet	
The Guild and Harkor	nnens reaffirm their alliance.		Bene Gesserit:	4 tokens Carthag, 3 tokens False Wall West (18),	3 tokens Harg	
	Spice Blow (cont.)			Pass, 5 tokens Polar Sink, 5 tokens off-planet		
Fremen decline to rid	e the Worm.		Bene Tleilaxu:	Traps: in Habbanya R	idge Sietch	
6 spice Wind Pass North Turn 7 spice blow:			Emperor:	8 tokens (2 Elite Sadaukar) False Wall South (4)	se Wall South (4), 12 tokens (3	
			Elite Sadaukar) off-planet			
	Bidding		Fremen:	10 tokens Sietch Tabr, 3 tokens Cielago South (2), 5 tokens (2 Fedaykin) in the tanks, 1 token Habbanya Erg (16), 1 token (1 Fedaykin) southern hemisphere 7 tokens Tuek's Sietch, 6 tokens in the tanks, 7 tokens off- planet		
CHOAM Charity reci	pients: Bene Gesserit.					
	Eligible bidders are: Atreides (3 cards), Ben	e Tleilaxu (1				
card), Fremen (2 cards	s), and Guild (1 card).	26	Guild:			
Cards are:			Harkonnens:	8 tokens Carthag, 5 tokens Plastic Basin (14), 7 t	okens off-	
				planet		
				Common Course (black)		
			Your Spice:	The Lesser Proved (194)	and Frank	
			Your Intrigue can	rds:		

Your traitor(s):

S.O.B.



Dogface Epoch V Empire Selection

Epoch V Franks, Vikings, Holy Roman Empire, and Chola due: 9/16 Tuesday

Dogs and Deities passes to APA

APA passes to Royal Manticoran Historical Society

Royal Manticoran Historical Society passes to the Arachnids

Common Cause passes to Legacy Project

The Legacy Project passes to Dogs and Deities

Arachnids pass to Common Cause

Players

Player Name	Player Faction Name	Empire Strength Points	Victory Points
Andy Lewis	Dogs and Deities (DAD) (orange)	26	60
Chris Geggus	APA (green)	30	79
Kevin Wilson	Royal Manticoran Historical Society (purple)	30	70
Cary Nichols	Common Cause (black)	32	71
Dennis Cain	The Legacy Project (red)	46	86
Paul Bolduc	Arachnids (blue)	47	74

Final Positions

Royal Manticoran Historical Society. INDUS VALLEY: Two armies *Western Deccan, Western Ghats*, and *Ceylon*. ASSYRIA: Army *Western Anatolia*. CELTS: Three armies and Monument *Albion*, two armies *Scandinavia*, armies *Baltic Seaboard*, and *Northern Gaul*. GOTHS: Army and Monument *Central Europe*, *Eastern Anatolia*, and *Upper Tigris*, armies *Northern Apennines*, *Dneipr*, and *Caucuses*.

The Legacy Project. Fleet Red Sea. BABYLONIA: Army Persian Salt Desert. SASSANIDS: Two armies, Capital, and Monument Zagros, army and Monument Persian Plateau, army Hindu Kush. HIGHLAND KINGDOM: Army, city, and fort Highlands. ARABS: Army, Capital and Monument Arabian Sea, army and Monument Levant and Nile Delta, armies Palestine, Nubia, Upper Nile, Libya, Shatts Plateau, Southern Iberia, and Pyrenees.

Dogs and Dieties. Fleet South China Sea. ARYANS: Army Turanian Plain. MAURYANS: Two armies, Capital, and Monument Ganges Delta, army Eastern Ghats. NORTH AMERICAN MIGRANTS: Armies Mexican Valley and Pacific Seaboard. KHMERS: Army, Capital, and Monument Mekong, armies Malayan Peninsula, Sumatra, and Chekiang.

APA. Fleet *Bay of Bengal.* CHOU DYNASTY: Two armies *Irrawaddy*, army *Si-Kyang*. MAYANS: Army and Capital *Central America*, army *Guiana Highlands*. HAN DYNASTY: Army and Monument *Tarim Basin*, army *East Indies*. CIVIL WAR: Army *Southern Apennines*. GUPTAS: Army and Capital *Eastern Deccan*, army and Monument *Upper Indus* and *Lower Indus*, army *Ganges Valley*.

Common Cause. Fleets Black Sea (2), Eastern Mediterranean (2), and Western Mediterranean (2). GREEK CITY STATES: Army and city Crete. HSUING-NU: Armies Mongolia, Eastern Steppe, Manchurian Plain, Yellow River, and Wei River. BYZANTINES: Army and Capital Balkans, armies Danubia, Dalmatia, Pindus, Morea, and Western Anatolia.

Arachnids. ROMANS: Two armies and Monument *Middle Tigris*, army *Lower Tigris*. GOLD COAST KINGDOM: Army, city, and fort *Gold Coast*. T'ANG DYNASTY: Army, Capital, and Monument *Yangtse Kian*, armies *Great Plain of China*, and *Szechuan*.

Event Cards

Your Event Cards are: _

Epoch V Empire

<u>Wolfbane</u> Turn 12 Turn 13 due: 9/16 Tuesday

Commander Actions

2114 Corporation opens the bidding on Robots at 50 and gets it (Wa5, Wa8, Wa9, Re12, Mi16) and buys 2 robots (Wa7, Re13)

Planets 'R Us opens the bidding on an Outpost at 100 and gets it for 105 (Wa5, Wa7, Wa9, Wa9, MWa, Re11, Re11, Re13, Ec discount) and buys a population factor (Wa5)

Discovery Project opens the bidding on an Outpost at 100 and gets it for 103 (Or3, Or4, Wa5, Wa8, Wa8, Ti8, Ti10, Ti10, Ti10, Ti12, HE discount, Ec discount). Moves a population from an ore factory to man the titanium factory.

OCEAN opens the bidding on an Orbital Lab at 50 and gets it for 66 (MWa, Ti9, Ti9, Ti9, Ti9). Buys a robot (Ti10)

Minas Ithil opens the bidding on an Outpost at 100 and gets it (Or3, Or4, Wa7, Wa9, Wa9, Ti9, MTi, HE discount) and buys 2 robots (Ti8, Ti12)

Bartertown opens the bidding on Ecoplants at 30 and gets it (Or4, Wa4, Ti10, Ti12). Buys a titanium factory (Wa7, Wa7, Ti7, Ti10) and moves a population factor from an ore factory to man it.

Dogs in Space passes

HBDC opens the bidding on a Laboratory at 80 and gets it (Or4, Or4, Or5, Wa5, Wa7, Wa8, Wa8, Wa8, Wa9, DL discounts) and buys a robot (Or4, Wa6).

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	Outpost Name	Commander	Factories	Upgrades	VP
1	2114 Corporation	Dennis Cain	OrF, OrF, WaF, WaF, WaF, WaF, WaF, WaF, ReF, ReF	No, DL, OL, 2La, Ro	30
2	Planets 'R Us	Dave Partridge	OrF, OrF, WaF, WaF, WaF, WaF, WaF, WaF, WaF, TiF, ReF, ReF	No, DL, Ec, La, Ou	30
3	Discovery Project	Cary Nichols	OrF, OrF, WaF, WaF, WaF, TiF, TiF, TiF, TiF	2Wa, No, HE, Ec, Ou	27
4	Minas Ithil	Bill Scharf	OrF, OrF, WaF, WaF, WaF, TiF, TiF, TiF, TiF, TiF	HE, 2Wa, Ro, Ou	25
5	OCEAN	Michael Lowrey	OrF, OrF, WaF, WaF, WaF, WaF, TiF, TiF, TiF, TiF, TiF	No, HE, Ro, OL	25
6	Bartertown	Andy York	OrF, OrF, WaF, WaF, TiF, TiF, TiF, TiF	HE, No, Ro, Ec	22
7	HBDC	Kevin Wilson	OrF, OrF, WaF, WaF, WaF, WaF, ReF	2DL, Wa, Ro, La	19
8	Dogs in Space	Andy Lewis	OrF, OrF, WaF, WaF, WaF, TiF, TiF, ReF	DL, HE, La	15

Available Upgrades

New Arrivals: Space Station, Planetary Cruiser, Ecoplants, Orbital Lab, Orbital Lab, Orbital Lab, Scientists

Upgrade	Minimum Bid	Available	Not Yet Delivered
Scientists (Sc)	40	1	4
Orbital Lab (OL)	50	3	0
Robots (Ro)	50	0	0
Laboratory (La)	80	0	0
Ecoplants (Ec)	30	1	1
Outpost (Ou)	100	1	1
Space Station (SS)	120	1	5
Planetary Cruiser (PC)	160	1	5
Moon Base (MB)	200	0	6

Income

OCEAN and Planets 'R Us take MegaWater cards, Minas Ithil takes a MegaTitanium card. OCEAN discards Or2, Or3.

Guard Dog

Turn 3 Funeral Commission through Parade Phase Turn 3 Special Influence Declaration due: 9/16 Tuesday

Funeral Commission

LVC, TCC, and MLI all attempt to gain control of Strychnin. LVC ends up declaring 6 IP, TCC 8 IP, and MLI 9 IP. TCC, MLI, and UNCLE all attempt to gain control of Eatstumuch. MLI ends up declaring 3 IP, UNCLE 5 IP, and TCC 6 IP. LVC declares 2 IP on Schukrotoff, and 1 IP on Niewitko. Talksalot nominates Zenjarplan as Party Chief. Zenjarplan and Talksalot vote yes, everyone else votes no. Talksalot ages to 71. He then nominates Goferbrok. Talksalot, Goferbrok, and Eatstumuch all vote yes, Zenjarplan, Strychnin, Schukrotoff, and Niewitko all vote no. Talksalot ages to 72 and becomes the new Party Chief.

Replacement Phase

Lech Schukrotoff advances to Foreign Minister by age. Andrej Purgemoff (F) advances to Economy Minister by age. Strychnin promotes Wassily Protsky (U) to Candidate (ages to 58.

Rehabilitation Phase

None.

Parade Phase

UNCLE plays Visit the Sanatorium (7) on Antonj Talksalot (dr = 4 + 2, fails). Antonj attempts to wave (dr = 2, fails). Ages to 74.

Special Influence Declaration Player Order

LVC, TI, MLI, TCC, UNCLE, HLS

<u>Politburo</u>					
Office	Politician	Condition	Influence		
Party Chief	Antonj Talksalot (J)	74, ++, ?	4 (HLS)		
KGB Head	Tigran Zenjarplan (Q)	72, +, weak	5 (MLI), 6 (HLS)		
Foreign	Lech Schukrotoff (B)	75, ++, ?	1 (HLS), 2 (LVC)		
Defense	Alexei Goferbrok (C)	80, +, strong	1 (TCC)		

Office	Politician	Condition	Influence
Ideology	Mikail Strychnin (T)	58, strong	6 (LVC), 8
and the same	at anoth politica	and south the	(TCC), 9 (MLI)
Industry	Sergei Eatstumuch (M)	64, ++	6 (TCC), 3
	18112	The second second	(MLI), 5
	A STA	and the second second	(UNCLE)
Economy	Andrej Purgemoff (F)	71, weak	Section and
Sport	Petr Niewitko (D)	74, +, ?	1 (LVC)

Politicians listed in **bold** are in the sanatorium. Influence in **bold** indicates controlling faction.

controlling faction.		
Candidates:	K, O, P (63), U, Z	
People:	G, H, L, N, S, V, W, X, Y (54, 10 II	P [UNCLE])
Siberia:	E (73), R	
Kremlin Wall:	A, I	
	<u>Players</u>	
Andy Lewis	Trotskyite Internationalists	
Pasquale Giovine	Marxist-Lenninists Integralists	
Mike Scot	The California Connection	
Ward Narhi	Underground Neo-Communist Libe	eration Effort
Bob Robles	Hard Line Stalinists	
Chris Geggus	Lubianka Visitors Club	
MLI have one wave	, TCC have one wave.	

Intrigue Cards

Undeclared Influence

10

Dogged

Turn 5, Phases IV-VI and Turn 6, Phases I-III

Turn 6 Phases IV-VI and Turn 7 Phases I-III due: 9/16 Tuesday

Turn 5

Construction and Operation

Red (Scharf) operates claim #85 (\$30, 3 coal) and delivers 3 coal to Denver for \$240. Receives \$130 in passenger revinue.

Green (Nichols) operates claim #32 (\$50, 1 gold), delivers 5 gold to Denver for \$1375.

Orange (Narhi) operates claim #107 (\$50, 2 copper), claim #109 (\$20, 1 copper), and claim #116 (\$30, 3 lumber). Receives \$60 in passenger revinue.

Blue (Bolduc) buys claim #30 (\$80) and operates it (\$30, 4 gold). Collects \$20 in passenger revenue.

Purple (Carl) operates claim #89 (\$30, depletes), and claim #129 (\$40, 2 copper). Delivers 1 coal to Denver for \$80. Buys a 24 power train for \$200.

Determine Price Changes

Gold: -2	to \$250	Copper: +3 t0	\$400	Silver: +	2 to \$240
	Denver	Salt Lake City	Pueblo	Santa Fe	El Paso
Lumber:	Remains at \$40	-1 to \$80	-2 to \$80	+3 to \$80	+1 to \$60
Coal:	Remains at \$80	Remains at \$60	Remains at \$60	+2 to \$100	+2 to \$120

Turn 6

Move Prospectors and Surveyors

Red (Scharf) surveys Salida to Gunnison. Prospects #48.

Green (Nichols) surveys Fairplay to Dillon. No prospecting.

Orange (Narhi) surveys Belen to Albequerque and Silver City to Pinos Altos. No prospecting.

Blue (Bolduc) surveys Green River to Cisco and Ouray, Utah to Rangely. Prospects the deck.

Purple (Carl) surveys Leadville to Dillon. No prospecting.

Dispute Resolution

No disputes. Blue draws claim #130 (Bingham copper). Red pays \$360, Green pays \$140, Orange pays \$200, Blue pays \$260 or \$380, and Purple pays \$160.

Press

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For Sale: Potentially lucrative claim in Georgetown. Or contract to haul the gold to Denver. Contact Boris and Nartasha RR, Salt Lake City.

B&NRR - GM: Did the dog eat all the Western claims?

GM - B&NRR: The poor thing has the worst case of indigestion I've ever seen. But fortunately for you, he seems to have coughed some up. Don't mind the mess.

R. C. 184	dist.	200302 87 (10 10	NO. SHERE FROM	NA VO	Ine Player	<u>'S</u>
Player	Color	Starting Location	Money	Trains	Snowplows	Personnell
Bill Scharf	Red	Denver	\$1140	9, 15	(autor)	P+1, S+1
Cary Nichols	Green	Denver	\$1385	9, 15		P+1, S, S
Ward Narhi	Orange	El Paso	\$135	9		P+1, S, S
Paul Bolduc	Blue	Salt Lake City	\$1160	9	Selved _	P+1, S, S
Joe Carl	Purple	Pueblo	\$0	9, 15, 24	ondark	P+1, S, S

Purchased Claims

#	City	Owner	Туре	Goods	Operation
85	Canon City	Red	Coal	12	\$30
48	Ouray	Red	Silver	N	\$40
32	Fairplay	Green	Gold	0	\$50
38	Aspen	Green	Silver	N	\$40
98	Pinos Altos	Orange	Gold	6	Depleted
109	Pinos Altos	Orange	Copper	5	\$20
116	Pinos Altos	Orange	Lumber	5	\$30
107	Santa Rita	Orange	Copper	2	\$50
37	Eureka	Blue	Silver	3	Depleted
30	Georgetown	Blue	Gold	4	\$30
43	Leadville	Purple	Silver	4	Depleted
129	Dillon	Purple	Copper	5	\$40

Purchased Pas	senger Lines	
T		

Ħ	Type	Route	Payon	Owner	Notes
3	A	Denver - Colorado Springs	\$50	Red	A OF STATES
5	A	Denver - Pueblo	\$80	Red	Plast Lot P
4	A	El Paso – Deming	\$60	Orange	
2	A	Salt Lake City - Provo	\$20	Blue	Contract of the second

.

#	City	Tune	Claim	Operation
#	City	Туре	Claim	Operation
80	Aspen	Coal	\$60	\$30
114	McGaffey	Lumber	\$40	\$30
65	El Vado	Lumber	\$100	\$30
113	Porter	Lumber	\$60	\$30
121	York Canyon	Coal	\$100	\$30
51	Silverton	Silver	\$60	\$30
122	Lee Ranch West	Coal	\$60	\$20
130	Bingham ¹	Copper	\$120	\$80
34	Heber City	Silver	\$80	\$40

¹ Blue has first right of refusal

#	Туре	Route	Payoff	Cost	Notes
12	В	Pueblo – Grand Jct.	\$150	\$310	Discard when 20 is taken. Good for \$150 toward card 20 or 21
10	В	Denver – Aspen	\$130	\$250	Supel second sect.
8	А	Denver – Leadville	\$260	\$500	Discard after 4 Leadville depletions
16	В	Salt Lake City – Grand Jct.	\$250	\$465	Discard when 22 is taken. Good for \$250 toward card 22
7	A	Pueblo – Santa Fe	\$120	\$280	
1	A	Denver – Boulder	\$20	\$45	
6	A	Santa Fe – Albuquerque	\$90	\$180	
11	В	Salt Lake City – Grand Jct.	\$140	\$310	Discard when 20 is taken. Good for \$140 toward card 20 or 21

2	Available Trains	
Туре	# Available	Cost
9	1	\$80
15	3	\$120
24	7	\$200

	Available Snowplow	<u>s</u>
Туре	# Available	Cost
Die +2	3	\$40
Die +3	4	\$80

Show and the lot up relief.

<u>Junk Yard Dog</u> Turn 2a Turn 2b due: 9/16 Tuesday

		<u>Available Cards</u>	piara i	A TAP
Set 1	Set 2	Set 3	Set 4	Set 5
Waste Disposal	Growth	Waste Disposal	Order	Order
Advisor	Waste Removal	Hiring/Firing	Bribery	Innovation
Innovation	Raw Materials	Raw Materials	Raw Materials	Growth

Dave selects set 1.

Andy selects set 5.

Cary selects set 2

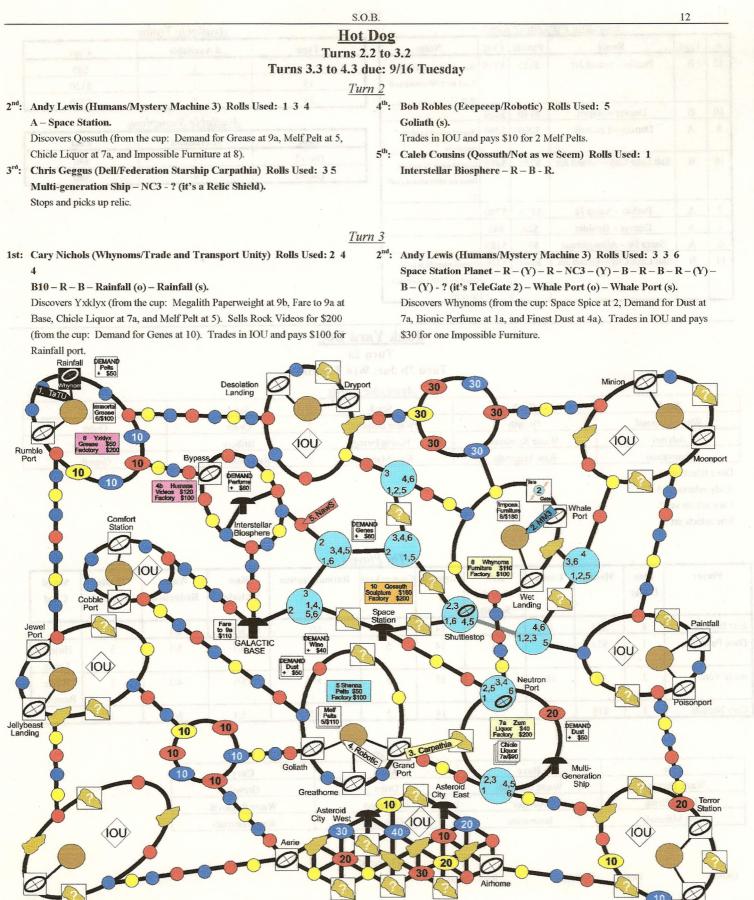
Eric selects set 3.

Player	Play Order	Money	Loans	Raw Material Supply	Growth	Co-workers	Rationalization	Raw Materials	Waste Reduction	Waste Disposal	Saved Card
Eric Brosius	4	\$24	0	0	14	5	5/1	5/1	5/1	1	Sold and Sol
Dave Partridge		\$24	0	0	14	5	5/1	5/1	5/1	3	Hiring/ Firing
Andy York	2	\$6	10	15	15	5	5/1	5/1	4/3	1	Waste Removal
Cary Nichols	3	\$19	0	5	14	5	5/1	5/1	5/1	1	and the

A	stable state	<u>Cards</u>	208060
Eric	Dave	Andy	Cary
Waste Disposal	Waste Disposal	Order	Growth
Hiring/Firing	Advisor	Innovation	Waste Removal
Raw Materials	Innovation	Growth	Raw Materials

Discards

Growth Order Bribery Raw Materials

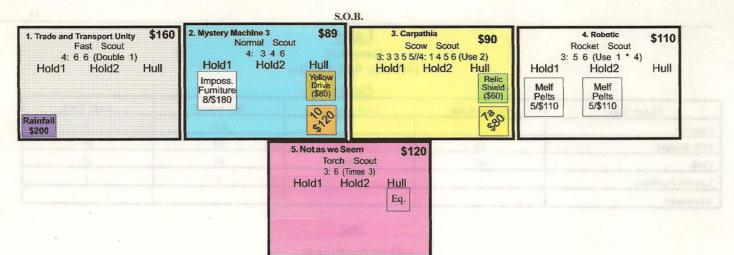


Titan's

Towe

Ice





Goods and Demands:

1a (Nillis): 3 Bionic Perfume

1b (Volois): 2 Voll Silk

2 (Graw): 2 Space Spice, 1 Demand for Psychotic Sculpture (+\$90)

3 (Niks): 1 Demand for Bionic Perfume (+\$60)

4a (Dell): 1 Demand for Mulch Wine (+\$60), 3 Finest Dust

4b (Humans): 1 Demand for Bionic Perfume (+\$60)

5 (Shenna): 1 Demand for Mulch Wine (+\$40), 2 Demand for Finest Dust (+\$50), 2 Melf Pelts

6 (Yxklyx): 1 Immortal Grease, 1 Demand for Melf Pelts (+\$50)

7a (Zum): 3 Chicle Liquor, 1 Demand for Finest Dust (+\$50)

7b (Eccepcecp): 1 Servo-Mechanism, Fare to Base (\$110), 1 Demand for Dust (+\$50), 1 Demand for Immortal Grease (+\$50)

8 (Whynoms): 1 Impossible Furniture

- **9a (Chola):** 2 Designer Genes, 1 Demand for Chicle Liquor (+\$60), 1 Demand for Immortal Grease (+\$50)
- **9b (Wollow):** 1 Demand for Impossible Furniture (+\$70), Fare to 5 (\$110), 2 Megalith Paperweight

Key

- 10 (Qossuth): 2 Demand for Designer Genes (+\$60)
- Base: Fare to 9a (\$110)

<u>Gray Wolf</u> Gamestart Turn 1 due: 9/16 Tuesday

Country	Player	Money	Available Soldiers	Ships	Colonists
Dutch	Andy York	\$160	24	0	0
English	Dennis Cain	\$160	24	0	0
French	Bob Robles	\$160		0	0
Portugese	Cary Nichols	\$160	24	0	0
Spanish	Andy Lewis	\$160	24	0	
Sweedish	Dave Partridge	\$160	24	0	on the state of the

Notes

As a rules recap, we will be using all regular rules except 13.3 (Secrecy) and we will be using optional rule 16 (Piracy). This will also be the exploration game. For this first turn, I will need your complete first turn orders including Initial Anchorage Bids and whether you want to roll for colonists or take the automatic 4. If you express no preferences, your bid will be 0 and you will get 4 colonists.

Soldier 0 Colonist Mine Nati 3 11 0 0 1 0 M 3 Δ 10 B Climate 34 5 12 1 5 100 More Key ∆ Site S A Mine Z C Gold Ba Political Control 6 Native City C Resource Doubled

FRUS, the principal intertiment has been the Barat and Liansant Score Experiment (BATSE) on the Compute Equinal Play Observatory. (The Compute observatory was recently de-orthited because of mainmetions to its (streacepin BATSE was retricted dates two in three GRBs in a syntext ray contang horizoid datestions in the way. (The record fact indicated from they wave extinutions).

most of the stars are "The GRHs indi min two mean categorites short and show fifthe as these that fasted two seconds or less, and long GRHs were read. Unferturently gamma rate heavy affini they are - categority high a picture - it is ware defined to becas them as BATSE was combte to pan the long tors of the basic very normately. So the taystary endured,

the next step was taken when the fibinit spece appears matched and a sentences and the light of the local sentence of the sent

Laika Gamestart

1956 due: 9/16 Tuesday

Players

Player Name	Dennis Cain	Cary Nichols	Bill Scharf	Andy York		
Country	?	?	JOE	?		
1956 Budget	60	60	60	60		
Cash	60	60	60	60		
Launch Facilities	1	the second second	1	1		
Astronauts						

1956

Draw Event Cards

Andy York:	Counter Espionage: Lower safety factor of opponent's program to yours (not	applicable). +7MB to budget.	
Bill Scharf:	Sabotage. Pay another player 10MB or lose 10% on safety factor of most adv	anced capsule on next mission (not applicable)	2MB to budget.
Cary Nichols:	Engineering Advance: All hardware is half price. +3MB to budget.		
Dennis Cain:	Corporate Investment: +4MB to cash. +7MB to budget		
Dennis Cain:	Corporate Investment: +4MB to cash. +7MB to budget		

		ions

Player Name	Dennis Cain	Cary Nichols	Bill Scharf	Andy York
Country	? .	?	JOE	?
1957 Budget	67	63	58	67
Cash	64	60	60	60

Trivia Quiz

You get 2 points for a solo answer, 1 point for sharing the correct answer with one A4. The average temperature at the South Pole is around -50 degrees Celsius. other person, and 1/2 point for sharing the answer with two or more people. Every No correct answers received. 10 points earn you a free issue. Research is allowed. Free issues are credited as Q5. How many of the world's 109 mountain peaks taller than 24,000 feet are found they are earned. Players may submit a list of questions (answers must be in the Himalayas? included.) If used, five points are awarded. In addition, if no correct answers are A5. According to the U.S. Geological Survey, 96 of the world's 109 peaks above received for a question, the supplier of the question receives two points.

And so, without further ado, the answers to last issue's questions

Q1. Who first suggested that it was the earth that orbited the sun?

A1. Greek astronomer Aristarchus of Samos was one of the first to suggest the earth moved about the sun around 310 to 230 B.C. Although Aristarchus found few followers, Polish astronomer Nicolaus Copernicus revived his theories in 1542.

No correct answers received.

Q2. At what temperature does human skin freeze?

A2. Skin freezes at 23 degrees Fahrenheit. Normal temperature of the skin is 94 degrees F.

No correct answers received.

Q3. When was the most recent reversal of the earth's magnetic field?

A3 The most recent polarity flip-flop was 780,000 years ago.

No correct answers received.

Q4. What is the average temperature at the South Pole?

24,000 feet are found in the Himalayas.

No correct answers received.

		Current Sco	ores		
Chris Geggus	91	Andy York	88	Joe Carl	70
Caleb Cousins	691/2	Paul Bolduc	67½	Bill Scharf	65
Dennis Cain	61	Brendan Whyte	57	Andy Lewis	54
Bob Robles	40	Steve Koehler	391/2	Ward Narhi	351/2
Tom Howell	281/2	Kevin Wilson	231/2	Cary Nichols	161/2
Brad Martin	16	Sean Cousins	7	Scott Hutchens	61/2
		New Questi	ons		

Topic: Miscellaneous Trivia

- 1. What is the fastest growing land plant?
- 2. What is the driest continent on Earth?
- 3. What animal has the longest gestation period?
- 4. How many man-made satellites are currently orbiting the earth?
- 5. What did Elisha Graves Otis invent?

Pedagoguery

Gamma ray bursts have presented one of the most enduring mysteries in all of astronomy. First detected in 1967 by a satellite designed to detect nuclear explosions on the Moon, astronomers have only recently had the tools to start to figure out what they are.

For most of the time that we have been observing gamma ray bursts (or GRBs), the principal instrument has been the Burst and Transient Source Experiment (BATSE) on the Compton Gamma Ray Observatory. (The Compton observatory was recently de-orbited because of malfunctions to its gyroscopes.) BATSE was able to detect two or three GRBs in a typical day, coming from all directions in the sky. This second fact indicated that they were extragalactic in origin - if they had come from within our galaxy, we would tend to see more of them in the plane of the galaxy and especially toward the galaxy's center, where most of the stars are. The GRBs fell into two main categories, short and long. Short GRBs are those that lasted two seconds or less, and long GRBs were all the rest. Unfortunately, gamma rays being what they are - extremely high energy photons - it is very difficult to focus them, so BATSE was unable to pin down the locations of the bursts very accurately. So, the mystery endured.

The next step was taken when the Italian Space Agency launched BeppoSAX, an X-ray observatory. By observing in the less-energetic X-ray spectrum, BeppoSAX was able to more accurately localize GRBs and to detect

their X-ray afterglows. This allowed ground-based observatories to look at the locations in visible light and radio and detect their optical and radio afterglows.

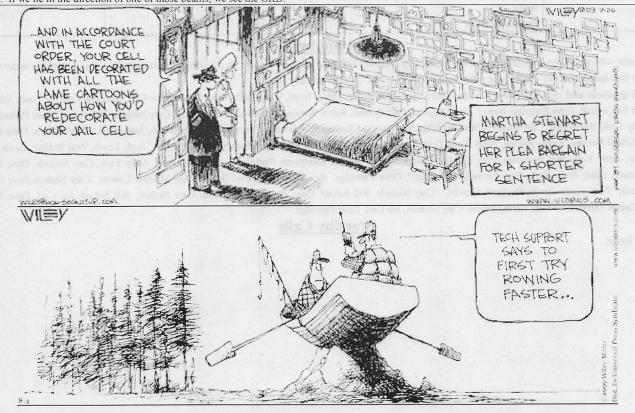
The real break came on May 8, 1997 when BeppoSAX observed GRB970508. Radio observations of the afterglow observed something unusual. The glow varied wildly in brightness – by as much as a factor of two – before settling down and then quietly diminishing. Astronomers figured that the wild variation was not due to anything intrinsic in the GRB but instead had to do with the intervening space that the radio waves traveled through. This is a phenomenon called scintillation. You can observe the visual aspect of this by studying a bright star close to the horizon. The image will tend to twinkle quite a lot, and it may flash through different colors as the different wavelengths of light are refracted in different ways by the atmosphere. So, the GRB was essentially a point source at first, but grew into a disc (at which point the scintillation stopped). This was the first evidence we had that some kind of explosion was involved.

Subsequent observations showed that GRBs released a tremendous amount of energy. On average, a GRB releases about 10¹⁹ times as much energy as the Sun does in a comparable time. Now, a supernova also releases this much energy, but most of it is released in the form of neutrinos, while GRBs were releasing that much in electromagnetic radiation. These are tremendously powerful events. In addition, long GRBs sorted themselves out into three different subcategories: normal GRBs, those that did not have a visible afterglow, and those that had little or no gamma rays, but were rich in X-rays.

Current theory puts the sources of GRBs into two categories. The first is the hypernova – the explosion of a star from 20 to 30 times the mass of our sun. In such an explosion, the core of the star quickly collapses into a black hole, and the surrounding matter forms an accretion disc around the hole. Any residual magnetic field of the star becomes tremendously concentrated and instabilities form blowing most of the disc away. The magnetic field channels most of the energy toward the poles of rotation, forming two beams aimed in opposite directions. If we lie in the direction of one of those beams, we see the GRB. The physics within the beam determine how we see things. First of all, the energy density is so high, that individual gamma ray photons can't escape, like people rushing out of a crowded theater when someone yells "Fire!" Eventually, the fast-moving blob of matter will encounter a slower-moving blob ejected earlier. This collision will produce the gamma rays we see. Since both blobs are moving toward us at nearly the speed of light, the time scale of events as we see them is tremendously compressed, so that events which took place in days or weeks, we see as taking mere minutes. Eventually, the combined blobs will impact with the interstellar medium surrounding the star. This produces the X-ray, visible, and radio afterglows. This scenario is now believed to explain normal long GRBs. Long GRBs that have no visible afterglow are probably extremely distant, obscured by dust, or simply intrinsically faint. GRBs with no gamma ray component are either extremely distant, or weighed down by extra particles which absorb the gamma rays, but let longer radiation through.

What about short GRBs? These can be explained through a different mechanism. If you have two neutron stars orbiting each other, they will eventually spiral into one another as gravitational radiation robs the system of orbital energy. When they do collide, like the hypernova case, they will form a black hole surrounded by an accretion disc. The explosion will probably take place in an area of space that is relatively isolated. (Massive stars that form hypernovae don't move very far from star forming regions in their very short lives before they explode, and those star forming regions tend to be very gas-rich. Neutron stars could have existed for billions of years before they spiral into each other.) This makes them a good candidate for the short GRBs. Since there is relatively little ambient matter around them, the collisions that characterize hypernovae are much smaller and take place much more quickly. They are also less likely to produce any kind of afterglow.

Next time, I will discuss magnetars.



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Standbys

Anybody who gets onto my standby list automatically receives one free issue of *S.O.B.* In addition, if you actually submit standby orders, you get another free issue. So, let's get those people standing by. The current standby list is:

Machiavelli (gunboat and regular): Steve Koehler, Bill Scharf, Bob Robles, Mike Scott, Ward Narhi, Paul Bolduc, Joe Carl, Pasquale Giovine, Andy York, Cary Nichols, Lee McConnell, Dave Partridge Dune: Steve Koehler, Paul Bolduc, Kevin Wilson, Ward Narhi, Andy York, Cary Nichols, Bill Scharf, Dave Partridge New World: Andy York, Bill Scharf, Cary Nichols, Dave Partridge Merchant of Venus: Paul Bolduc, Carrie Lewis, Bob Robles, Andy York, Cary Nichols, Dave Partridge Outpost: Michael Lowrey, Kevin Wilson, Andy York, Cary Nichols, Bill Scharf, Dave Partridge Stellar Conquest: Paul Bolduc, Kevin Wilson, Andy York, Cary Nichols, Dave Partridge Stellar Conquest: Paul Bolduc, Kevin Wilson, Andy York, Cary Nichols, Dave Partridge Itiftoff!: Dennis Cain, Andy York, Cary Nichols, Bill Scharf, Dave Partridge Age of Renaissance: Bob Robles, Michael Lowrey, Cary Nichols, Dave Partridge Kremlin: Andy York, Andy Lewis, Pasquale Giovine, Cary Nichols, Bill Scharf, Dave Partridge Silverton: Cary Nichols, Bill Scharf, Joe Carl, Dave Partridge Stetlers of Catan: Michael Lowrey, Chris Geggus, Cary Nichols, Joe Carl, Dave Partridge

Standby Calls

None this issue.