

10-5-04

①

Bolivia

Follow Malthus?

t	Pop	$\frac{\Delta y}{y}$ - should be constant
<62	3503	$(3835 - 3503) / 3503 = .0947$
66	3835	
<70	34212	:(?)
∴	∴	
<94	7237	$(7957 - 7237) / 7237 = .0995$
98	7957	

It appears that $\frac{\Delta \text{Pop}}{\text{pop}} = \%$ growth rate is constant. So ~~the~~ Bolivia had exponential growth from '62 to '98. This agrees with what Malthus predicted about Pop growth.

What about Food?

M. said linear: $\frac{\Delta y}{\Delta t} = \text{constant}$

(2)

Bolivia		$\frac{\Delta F}{\Delta t}$
t	Food	
62	33.8	$(39.1 - 33.8) / 4 = 1.325$
66	39.1	$(47.1 - 39.1) / 4 = 2.$
70	47.1	
:		: ? - Need all
90	100.6	$(113 - 100.6) / 4 = 3.1$
94	113	
98	136.4	$(136.4 - 113) / 4 = 5.85$

It seems that the rate of growth $\Delta F / \Delta t$ increases over time, rather than staying constant.

This does not agree with what M. said about Food Prod.

b Modern Malthusianism

Not enough food/capita
even though not both growing
as predicted

Modern Malthusianism ③ in Bolivia?

Compare % increase in Pop
to % increase in Food.

t	Pop	% inc in Pop = $\Delta \text{Pop} / \text{Pop}$
62	3503	$\frac{(7957 - 3503)}{3503}$ $= 127 = \cancel{127\%} 127\%$
98	7957	

t	Food	$\Delta F / F$
62	33.8	$\frac{136.4 - 33.8}{33.8} = 3.035$ $\approx 304\%$
98	136.4	

There's no evidence of
Modern Malthusianism in Bolivia
from '62 to '98. In fact,
the food supply grew much
faster than the population.

South Asia & Rice

(4)

Smooth Prod per capita

There's an increase in prod./cap.

This is a good sign for the region.

Yield There is a steady increase. This is again a good sign

Indexed Prod ditto.

So in our smooth Prod. This decreased & then increased

Monday Robyn Ball

Friday Jason Picarazzi

Lab Replacements