1. Introduction

2. The classification of members in VCoP

3. Motivation factors analysis of knowledge collaboration in virtual community of practice

3.1. Individual level motivation factors

3.1.1. Information value

3.1.2. Instrumental value

3.1.3. Extrinsic rewards

3.1.4. Reciprocity

3.1.5. Need for achievement

3.1.6. Need for power

3.1.7. Need for affiliation

3.1.8. Self-efficacy

3.2. Group level

3.2.1. Community identity

3.2.2. Community attachment

3.2.3. Community cohesion

3.2.4. Community satisfaction

Table 1: the classification of motivation factors for the virtual community members to participate in knowledge collaboration

Individual level	extrinsic motivation	Information value Instrumental value Extrinsic rewards Reciprocity
	Intrinsic motivation	Need for achievement Need for power Need for affiliation Self-efficacy
Group level	Community identity Community attachment Community cohesion Community satisfaction	

4. The causality of motivation factors and human behavior

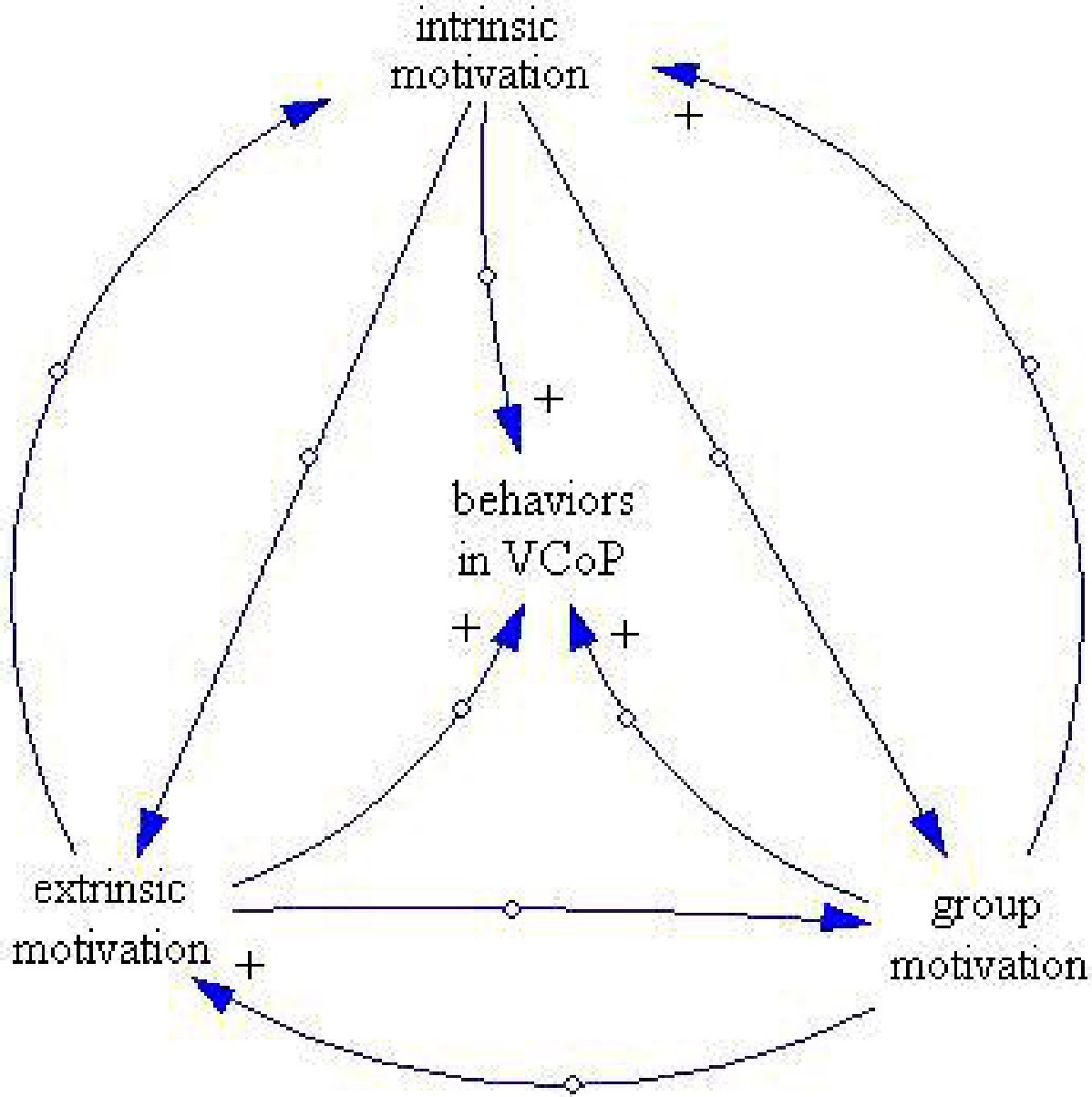

Figure 1: The basic causality of motivation factors and human behavior in VCoP

4.1. The motivation factors model of experienced members

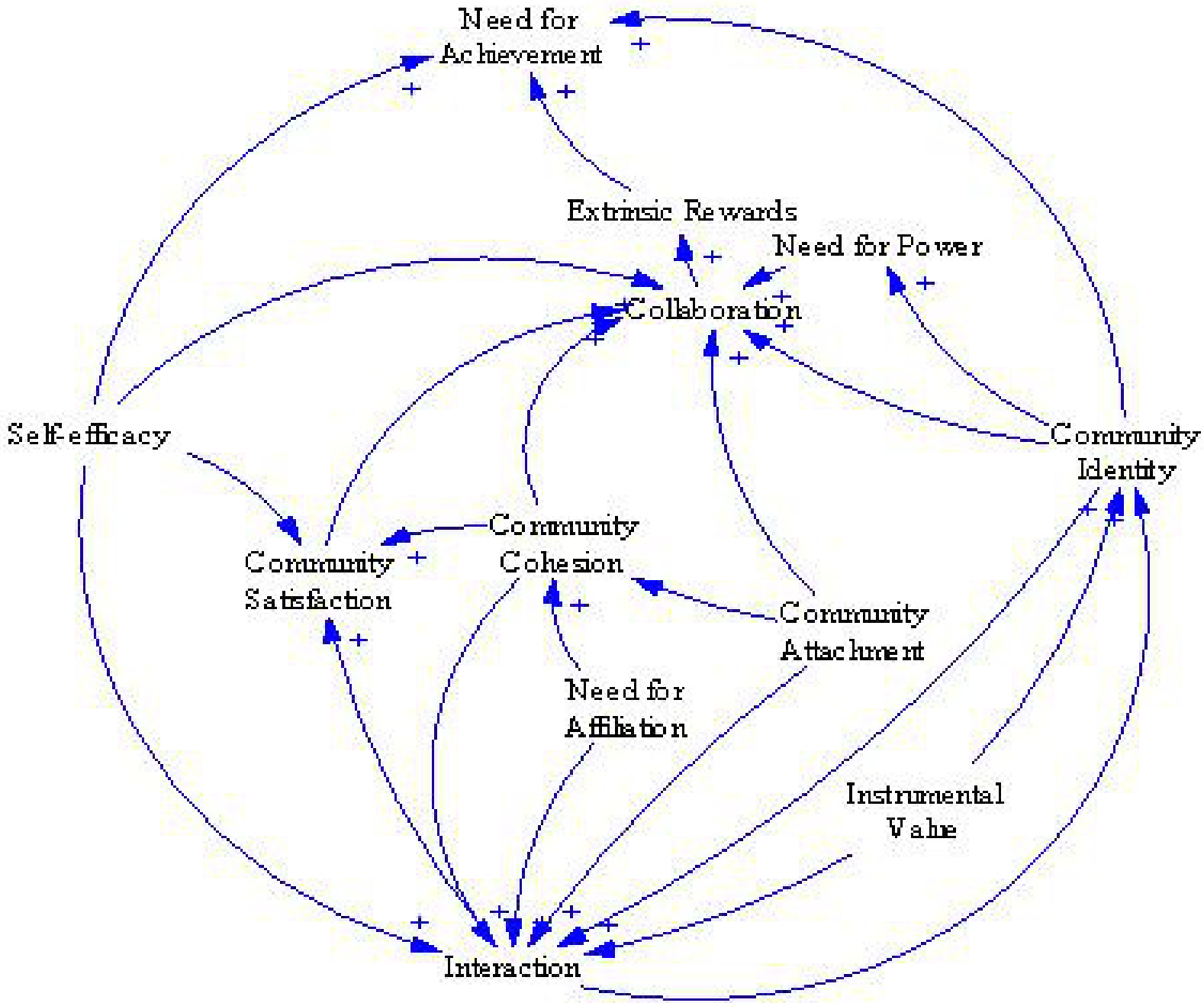

Figure 2: Model of motivation factors for experienced members in VCoP

4.2. The motivation factors model of common members

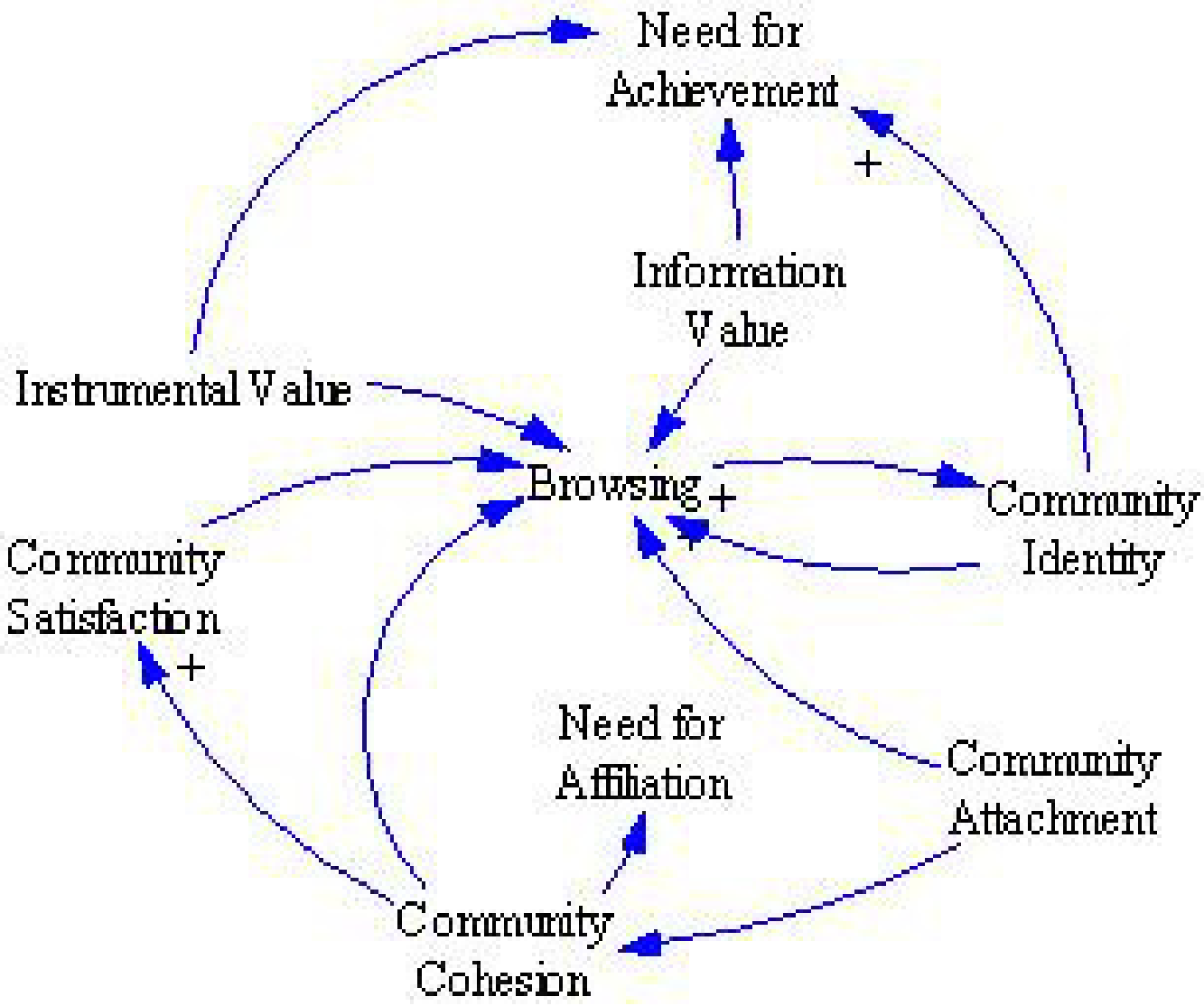

Figure 3: Model of motivation factors for common members in VCoP

5. Simulation research

5.1. The background of simulation research: Wikipedia

1

5.2. The elements in the simulation model

5.3. The hypothesis and initial parameters of simulation model

the name of variables	unit	initial value	scope of variales
Edit	times	100	0-
Talk	times	100	0-
Need for Achievement	/	30	0-100
Need for Affiliation	/	20	0-100
Sense of Belonging,	/	10	0-100
Member	person	100	0-

Table 2: Initial parameters of simulation model

5.4. System dynamics model of Wikipedia community

$Arising_A$

$Arising_Af$

$Satisfacting_A$

Satisfacting_Af

generating_B

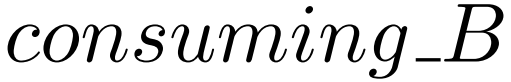

Table 3: The variables and input/output parameters in system dynamic model

horizontal variable	input stream params		output stream params	
the name of variables	name	parameter significance	name	parameter significance
Need for Achievement	A/Edit	the incremental n need for achievement of users per Edit	sA/E	the satisfaction of users of the need for achievement per Edit
			sA/T	the satisfaction of users to the need for achievement per Talk
Need for Affiliation	Af/Talk	the incremental need for affiliation of users per Talk	sAF/T	the satisfaction of users to the need for affiliation per Talk
	Af/B	the need for affiliation generated per affiliation		
Sense of Belonging	B/Talk	the incremental sense of belonging per Talk	/	/
Edit	Edit/A	Edit generated per unit of need for achievement	/	/
	Edit/B	Edit generated per unit of sense of belonging	/	/
Talk	Talk/B	Talk generated per unit of sense of belonging	/	/
	T/Af	Talk generated per unit of need fro affiliation	/	/

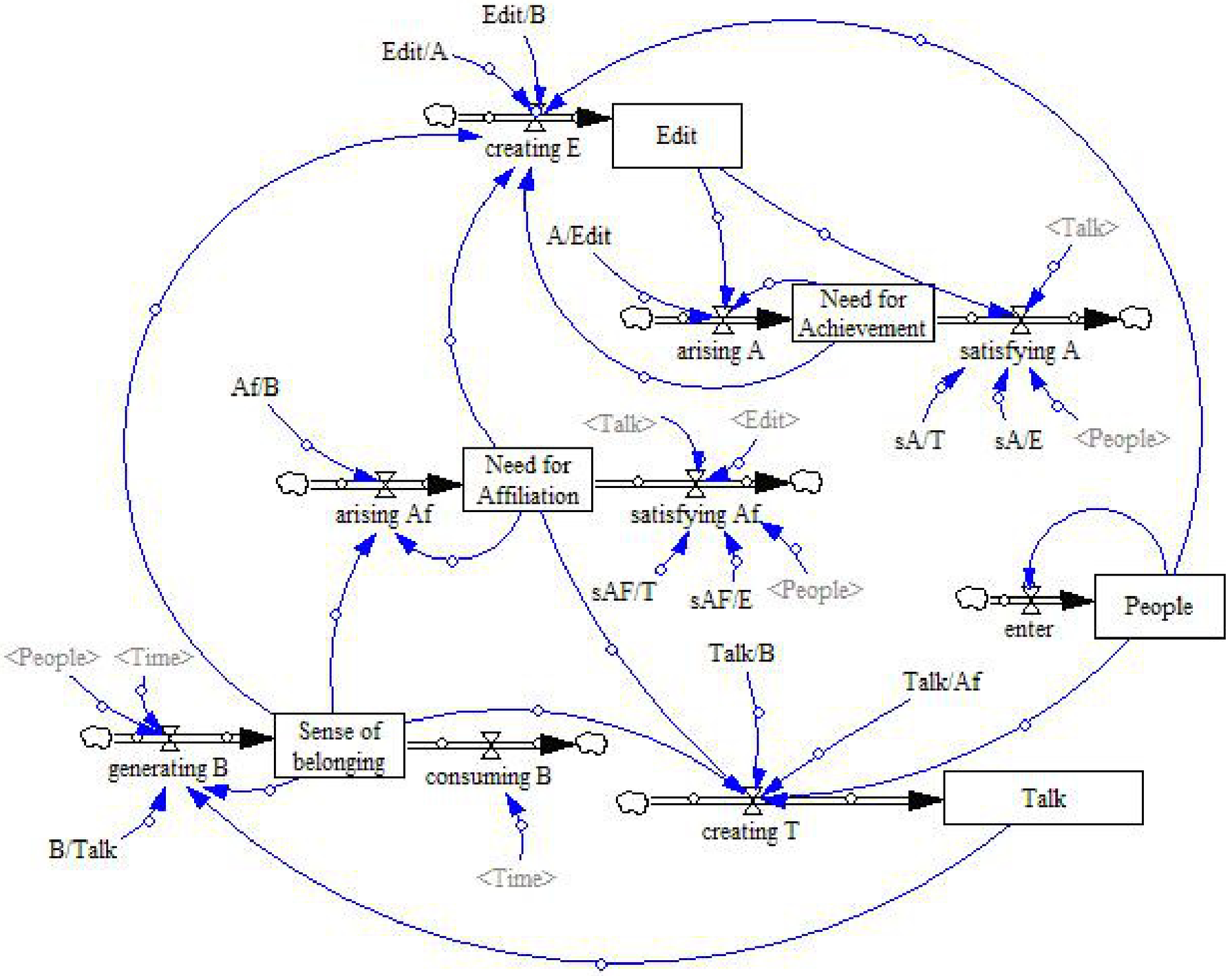

Figure 4: System dynamics model of motivation factors of Wikipedia community

5.5. The comparison between system simulation results and the historical data of Wikipedia

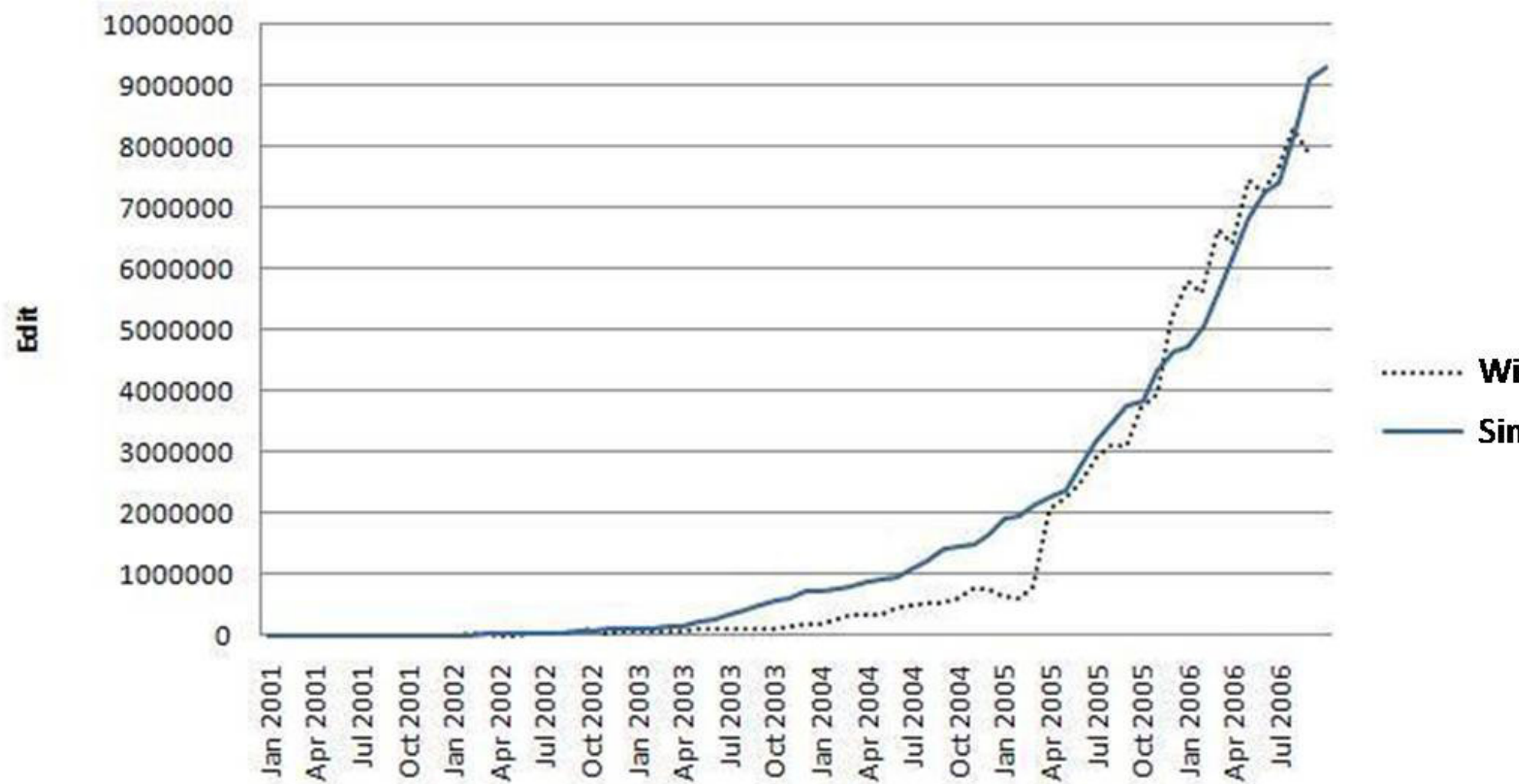

Figure 5: Comparison between system simulation results and the historical data

6. conclusion

7. Acknowledgment